

GRAN TURISMO 2

THE WORLD'S GREATEST RACER RETURNS

QUAKE III: ARENA

ID'S GOLDEN GUN LIVES THRICE

SONIC ADVENTURE

HAS SEGA'S DREAM COME TRUE?

PREVIEWED: SHENMUE • POWER STONE • KINGPIN • WILD METAL COUNTRY • MAKEN X • FLAME GLIDE • AERO DANCING • GT WORLD TOUR

REVIEWED: RIDGE RACER TYPE 4 • BLOOD 2 • MOTO RACER 2 • SOUTH PARK • ROGUE SQUADRON • EHRGEIZ • AKUJI • MAX POWER RACING





You've been grinding along in a mess of traffic on the motorway for 150 miles, the continual drone of the engine and the passing of white lines bringing about an almost hypnotic state of mind-numbing tedium. A signpost advises that a service station is situated at the next exit. You signal, leave the motorway and pull into a heaving car park. And what's the first thing you do when you enter the service station, after being behind the wheel for two solid hours? You contemplate sitting down behind another wheel for a session of simulated driving in the 'Games Zone'.

As any commuter will attest, driving can be the most sanity-depleting of pursuits. And yet it remains the most popular videogame genre ever conceived. It's also one of the most overpopulated, which means new examples must be rather special to make an impression. And *Gran Turismo* was certainly that.

A car nut's fantasy made real, Sony's supreme racer needs little introduction. Sales throughout Europe and Japan have soared into the millions (although its tracks apparently had a few too many corners for the American market), leaving few people in any doubt that a sequel was in production. But equally few could have foreseen just how far producer Kazunori Yamauchi would attempt to push the concept.

This issue, in a world exclusive report, **Edge** presents the first shots and hard facts concerning *Gran Turismo 2* (see p44), a sequel which promises to conquer all. The driving game stakes are about to be raised again, putting the PlayStation firmly back on the map.

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Colour reproduction

Colourworks Repro, Bristol
Phoenix Repro, Bath

Print

Cradley Print, Warley,
West Midlands
Edge is printed on Royal Press
90gsm

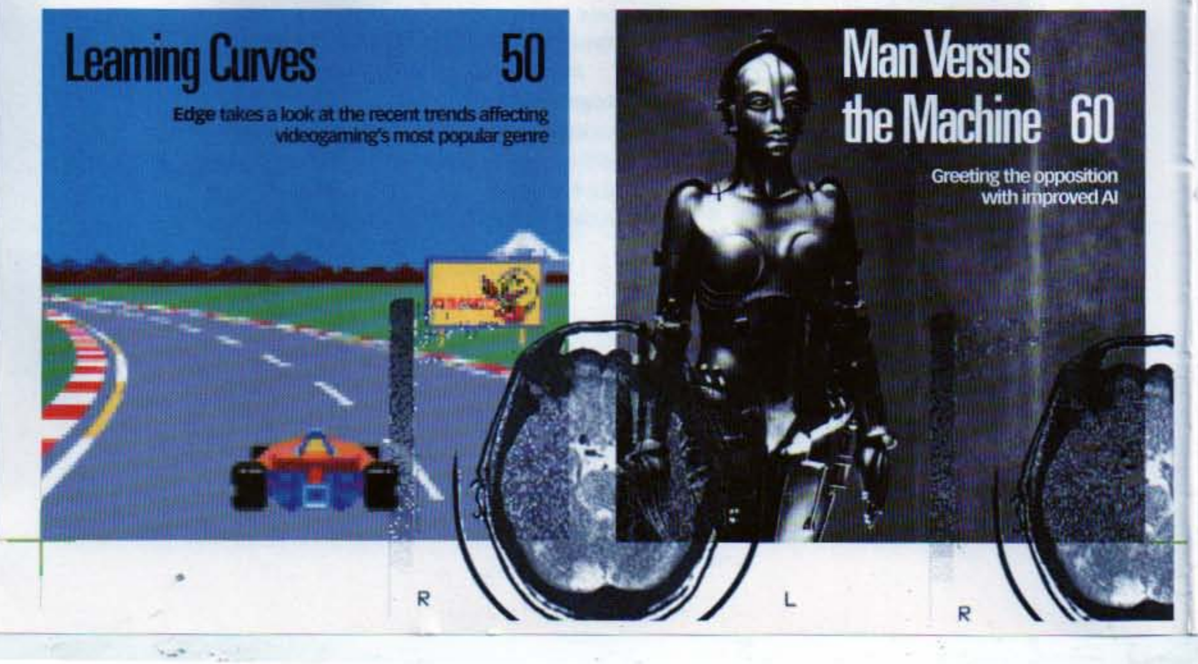
Production of Edge

Hardware Power Macintosh, G3,
PowerBook, Quadra by Apple
Software QuarkXPress, Adobe
Photoshop, Macromedia *FreeHand*,
Pixar *Typestry* and Nisus *Writer*
Typography (Adobe®)
Formata light/**regular**/**medium**/**bold**
Vectora light/**bold/black** Base12Sans/
bold/Univers Ultra Condensed
Fifth colours: Pantone®
cover 805 sections 8001/8520



Printed in the UK
© **Future Publishing** 1999

ABC (Audit Bureau of Circulation)



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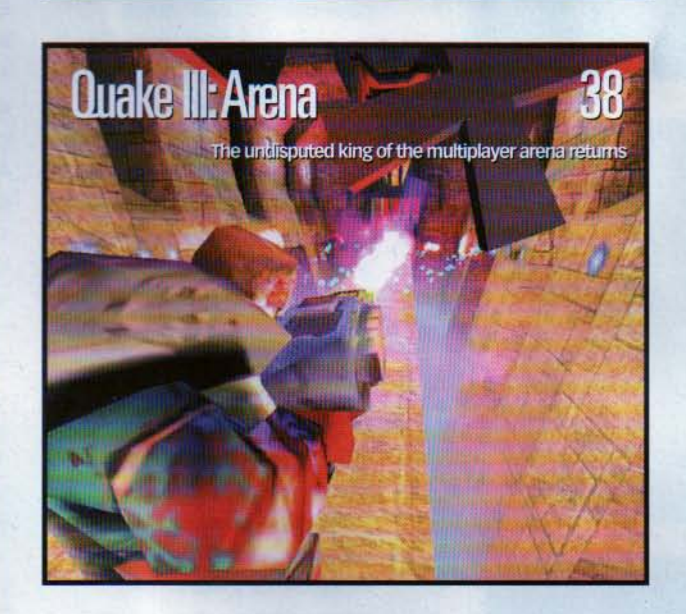
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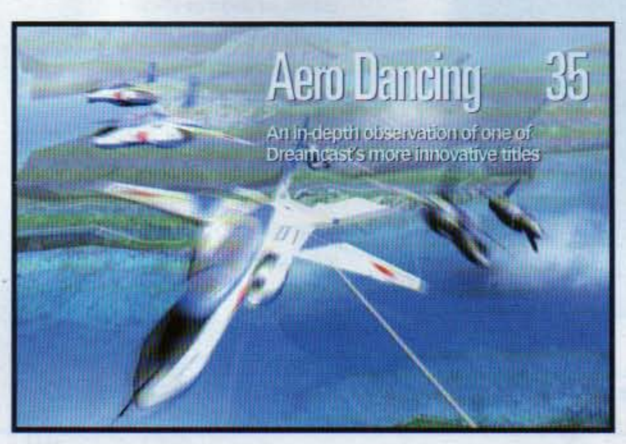
Another strong Dreamcast showing, but *GT World Tour*, *Wild Metal Country* and *Kingpin* muscle their way in

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Cutting Edge

The latest news from the world of interactive entertainment

PLAYSTATION 2 RUMOURS TRIGGER GENERATION TENSION

Developers express unease at the forthcoming shift to a 128bit videogaming world







With PS2 under wraps and still so much for Nintendo to prove, Dreamcast leads the way into the 128bit era

With Dreamcast already selling out in Japan, and PlayStation 2 speculation gathering pace, the console industry is facing its most significant technological overhaul since the arrival of the 32bit era four years ago. The difference now, however, is that any new format will be going up against a machine which has achieved massmarket penetration and is still selling huge numbers of units. Considering the buoyancy Sony's PlayStation has brought to the market, could the impending generational leap be a step too far, too soon?

One thing is certain: this is a difficult time for the industry. Although PlayStation software is still shifting many thousands of copies every week, some publishers are beginning to feel weary of greenlighting significant new projects for the platform. If a title goes into development now, it may not make it to market within two years, by which time Dreamcast will have a global presence (of whatever scale), and the PlayStation's sequel will no doubt have been unveiled in Japan (if not actually released there). A significant number of upper-echelon managers in the software industry believe punters may simply dump their current machines the moment a more comprehensively attractive carrot is waved in their faces.

Leading the field

Furthermore, the best, most innovative designers and programmers always want to be working at the cutting edge of technology. As Shiny Entertainment's **Dave Perry** told **Edge**, "Developers just love to work on the latest thing – gamers are the same – they want to experience the latest technology. That's the cycle that continually occurs and this means there is a huge blood rush to be the first game on the new machine." Which in turn means publishers may risk losing key staff over the coming months if they insist on sticking with 32bit development.

At the same time, however, it's just about impossible to predict how current videogame users are going to react to the forthcoming 128bit era. Of the 30 million PlayStation owners worldwide, only a fraction are hardcore gamers who understand obsolescence and actively look forward to the next big thing. A fair number of owners may well believe they've bought something akin to the VHS video recorder – a standard which will last for a decade. Even if PlayStation 2 is backwardly compatible (which would be the logical move for a product that is now so massmarket), it could take most users of the original machine a couple of years to make the transition to a brand new platform – by which time software sales could be in an entirely different state to how they stand today.

Even if gamers do quickly accept the mortality of the PlayStation, developers are still in for a testing time in attempting to settle on a new platform to write for. As **Peter Molyneux** recently told **Edge**, "It's no easy decision to make. There are three main options on which to develop games for the future. There is Dreamcast, which certainly seems accessible for development purposes but is still a relatively unknown quantity. PlayStation 2, on the other hand, has great potential but may not be released for a while. The final option is the PC, but the market could be said to be flooded just now."






Creating suitably impressive titles, such as *Sega Rally 2*, *Bio-Hazard Code: Veronica* and *Sonic Adventure*, for the first of the 128bit generation, Sega's Dreamcast console, is a lengthy business, requiring developers to make a serious commitment early in the machine's life. Not all codeshops are up to it

Despite recent hype, Dreamcast is by no means an assured option. The scale of the commercial beating Sega took at the hands of Sony in the 32bit console war no doubt still lingers in the minds of many publishers, and recent difficulties with the Japanese launch (see **E**66) will not have buoyed anyone's confidence. Furthermore, with PlayStation 2 in the wings, promising at least five times the power of Sega's machine, even the likes of *Sega Rally 2*, *Bio-Hazard 3* and *Sonic Adventure* (see p70) may not be enough to tempt punters away from waiting for Sony's next delivery.

Whatever the case, a question mark invariably hangs over the quality to be expected from the first wave of 128bit games. As the graphical limits of current console platforms draw close, developers are now having to rely on compelling gameplay to gain attention in the marketplace – hence games like *Metal Gear Solid* becoming such a big draw. It may be a good-looking title, but its developer incorporated innovative content to truly set it apart from anything PlayStation owners had previously seen.

A shaky start

However, with the switch to new platforms, innovative game concepts run a danger of flying out of the window as developers fumble with unfamiliar technology and publishers rush to exploit the 'vacuum' in key genres – bringing out derivative games which do little but up the visual ante. **Toby Gard** of Confounding Factor believes this is a perennial problem: "Generally, a new console arrives and the industry wants to hit the first wave when there are fewer titles, but a new market is emerging. You can make a lot of money with a fairly pants game in that period of time. That's why the first wave of games are often a bit substandard: the development time is deliberately short."

Dave Perry also believes that it's often the 'crappy' developers who rush to develop for a new platform first. "This is because they give up on the old machine and believe that now that they're working on a bigger and more complex machine everything will be all right," he says. "What you tend to see, then, is a lot of crappy games at launch mixed in with the gems that Nintendo and Sony ensure exist." (And Sega, too, of course, although it's clear that *Virtua Fighter 3tb* and, more obviously, *Sonic Adventure* were both rushed to market. Some of the early adopters of Sega's machine have expressed a degree of disappointment with *Sonic's* foibles, yet such glitches are more a case of hurried coding and testing than any failings in the machine's actual technical abilities.

Of course, there are many advantages to the forthcoming technological leap – apart from the obvious improvements in visuals and game size. Developers responsible for porting PC games across to the PlayStation, for example, are finding the task increasingly difficult as the gulf between the two platforms widens. The introduction of more powerful console technology will remedy this and should therefore free up designers to explore more advanced ideas. The 32bit bind will be broken.

Bridging the gap

Finally, however, there is a chance that the transition from this generation to the next won't be the stilted, confused, industry-threatening lurch it has always been in the past. Most large-scale publishers are now powerful enough to place key teams on Dreamcast development, while holding back less experienced groups to keep pushing out the *Tomb Raider* and *FIFA* sequels of this world to the Luddite 32bit market. As Perry puts it, "Some smart developers will hang on to PSX 1 to eat the low fruit on the tree." ⋿


Dave Perry, Shiny Entertainment

"DEVELOPERS JUST WANT TO EXPERIENCE THE LATEST TECHNOLOGY. AND THIS MEANS THERE IS A HUGE BLOOD RUSH TO BE THE FIRST GAME ON THE NEW MACHINE"


Peter Molyneux, Lionhead Studios

"DREAMCAST IS STILL A RELATIVELY UNKNOWN QUANTITY. PLAYSTATION 2 MAY NOT BE RELEASED FOR A WHILE. AND THE PC MARKET COULD BE SAID TO BE FLOODED"


Toby Gard, Confounding Factor

"GENERALLY, A NEW CONSOLE ARRIVES AND THE INDUSTRY WANTS TO HIT WHEN THERE ARE FEWER TITLES. THAT'S WHY THE FIRST WAVE OF GAMES ARE OFTEN A BIT SUBSTANDARD"

MILIA '99: MORE GAMES THAN EVER

Holiday time approaches as Cannes gears up for an interactive incursion

The videogame industry and how it must adapt to a rapidly evolving market place appears to be a key theme for the forthcoming Milia show, taking place between February 9 and 12 at the Palais des Festivals in Cannes.

Talent spotting

Edge has received a full list of conference events and forums and it reveals perhaps the most game-intensive line-up in the event's history. Symbolising this commitment is Milia Games '99 – a section of the main show dedicated to getting developers, producers, publishers and distributors together to negotiate deals, 'develop key international partnerships' and generally scout around for new talent. In tandem with this, the event also features the New Talent Pavilion, a showcase of interactive media projects developed by 27 amateurs, professionals and students who won Milia's annual international talent contest.

The roll call of videogame attendees may well make the organisers of ECTS a little nervous. Sony Computer Entertainment Europe will be showing off the PocketStation for the first time in Europe, and Eidos, UbiSoft, Infogrames and Take 2 are among the other big guns due to visit the event. Also swanning about, taking in the chic south coast atmosphere, will be gaming luminaries Nolan Bushell (who will preside over the Game Grand Jury for the Milia d'Or awards), Chris Roberts of Digital Anvil, Jez San and the ubiquitous Peter Molyneux, most of whom will be appearing as guest speakers.

It is perhaps the event's roster of forums and talks which provides the most interest, with 'Diversification' certainly hot on the agenda this year. On the Monday Doug Lowenstein of America's Interactive Digital Software Association has co-organised a discussion snappily entitled 'Contemporary Business and Policy Trends in Interactive Entertainment', which looks at how publishers can license out their successful brands (ie, videogame characters and themes) for use in TV, films, merchandising, Internet services, etc. Similarly, the Wednesday sees 'a panel of professionals' looking into the minefield that is the film/game tie-in – what's gone wrong in the past and how can such endeavours succeed in the future?

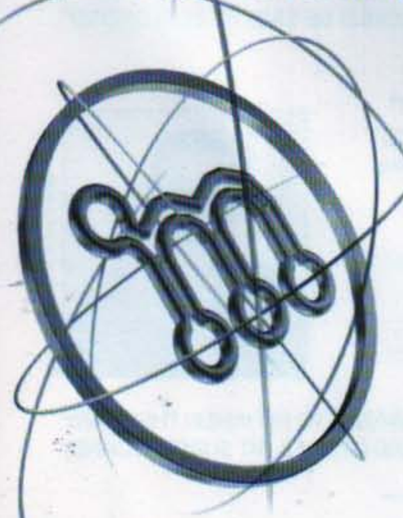


Pictured here at last year's Milia event (from left), Peter Molyneux, Sid Meier, Bruce Shelley and Jon Romero should be among the '99 attendees

Talk show hosts

There are slightly more digestible events, however. On the Tuesday Hisakasu Hirabayashi, a games analyst at the Interactive Institute in Japan, is to give a talk on the history of videogaming, and Peter Molyneux will be chatting on Wednesday afternoon about how to stay creative in the cut-throat, 'dog-eat-dog' videogame industry. Finally, Thursday evening includes a showcase for bright new industry talent in which up and coming developers talk about the difficulties of getting started in the interactive entertainment world.

MILIA SEEMS TO HAVE **A VERY COGENT PURPOSE:** TO GET THE INDUSTRY'S **CREATIVE PEOPLE TOGETHER** WITH PROFESSIONALS FROM THE **TV, FILM, INTERNET AND ANIMATION INDUSTRIES**



Unlike ECTS, then, Milia seems to have a very cogent purpose: to get the videogame industry's creative people together with professionals from the TV, film, Internet and animation industries (Milia is intended as a true multimedia event) so they can all talk about making money together. **Edge** just hopes all this talk of cross-pollination between game and film doesn't throw open the horrendous prospect of *Night Trap: The New Nightmare* or Wing *Commander V: Flogging A Dead Horse*, replete with action figures.

KEY MILIA EVENTS

Monday, February 8

3.30pm–5.00pm 'Contemporary Business and Policy Trends in Interactive Entertainment' (pre-event conference). Doug Lowenstein tells the videogame industry how to turn its videogame characters into films, cartoons, T-shirts and mouse mats.

Tuesday, February 9

2.30pm–4.00pm 'Games Transcend Time and Space: A History of Gaming.' Hisakasu Hirabayashi covers 20 years of history in one-and-a-half hours. **Edge** suspects he might have to leave out the Virtual Boy, CDi and everything Jeff Minter's done since 1986.

4.00pm–5.30pm 'Piracy: Publishers! Fight Back To Recapture Lost Dollars!' How to stop people pirating CD-ROMs, and therefore bring down the price of software. Allegedly.

Wednesday, February 10

12.00pm–13.30 'Creativity With Clout: A New 'Martial Art' from the Creative Wing of the Games Industry.' Peter Molyneux talks about how to create an independent in an increasingly corporate world. (Having shedloads of money probably helps a little.)

2.30pm–4.00pm 'PC Game Publishers Lost in the *Myst*? Getting Wise to What the Burgeoning Internet Audience Wants.' A conference co-organised by Lawrence Schick of America Online looking at which Internet games are successful and why.

2:30pm–5.00pm

Session 1 – 'I Want My Game!': Three animation companies pitch their work at the interactive entertainment industry in the hope of securing a videogame tie-in.

Session 2 – 'I Want My Movie': As above, but vice versa.

Thursday, February 11

5.00pm–6.30pm 'The New Blood of Computer and Video Gaming.' The international bright young things of videogaming flaunt themselves at the rest of the industry.

More info available at www.milia.com

SEGA CLAMPS DOWN ON DREAMCAST IMPORTERS

With its console's UK release now eight months away, can Sega halt the trade of Japanese machines here?

On December 19, 1998, Sega of Europe managing director **Mike Sherlock** issued a letter to various UK importers. It states that, 'We are now writing to caution you against the importation and/or offering for sale of Dreamcast. If you are currently involved in such activities, Sega will enforce its rights against the illegal sale and importation of its products by court proceedings and seizure actions.'

Edge was subsequently contacted by several importers, all of whom were puzzled by Sega's heavy-handed attitude towards a relatively small portion of the overall console business – and worried about the implications for both their companies and the import market as a whole. "We feel very strongly that if Sega can go through with this then it'll mean the end of imports," said one.

No guarantee

When asked by **Edge** to explain Sega's reasons for issuing this warning, Sherlock claimed a number of motivating factors. He asserted that, "There is no guarantee that it'll work on a multistandard TV, and we did get some calls on our consumer line from consumers who wanted English translations to Japanese manuals, who wanted to know when software was coming – so importing generates quite a lot of work." Disagreeing that buyers of import machines generally understand the complexities of owning an NTSC console, he maintained, "The consumer doesn't think that way. If the consumer has a problem they come to us."

Hardcore minority

On the question of early adopters and the role they play in spreading the reputation of a new console, Sherlock's attitude is somewhat at odds with accepted thinking on the matter, stating that, "It's not the view that we hold."

Traditionally, the console market has been led by a minority of hardcore gamers who have taken the plunge and invested in NTSC versions of new hardware – often at considerable expense. To measure the current extent of the market, **Edge** contacted some of the larger import firms and found the overall number of Dreamcast units in the UK to be between one and two thousand. UK PlayStation sales were around 500,000 in December.



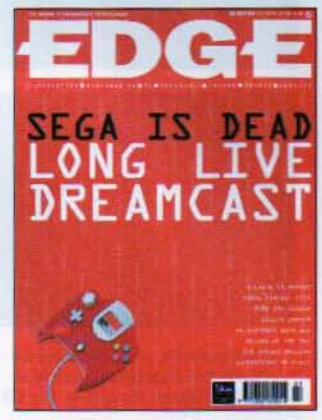
THE OVERALL NUMBER OF DREAMCAST UNITS IN THE UK IS BETWEEN **ONE AND TWO THOUSAND**. UK **PLAYSTATION SALES WERE AROUND 500,000** IN DECEMBER

Summing up the central interest in issuing Sega's warning, Sherlock said that, "Our main motivation is that Sega Europe is responsible for the successful launch of Dreamcast in Europe, and specifically for me within the UK, the best way to achieve this is to have the best product, which includes having all the software available for Europe, the correct marketing, and the consumer receiving the product in a way that they can understand it and use it."

Any question of Sega's warning arising as a result of the recent ruling in favour of Silhouette Sunglasses in the European court, wherein cheaply exported sunglasses were being imported back into Europe and sold at a discount and thus deemed to be demeaning the value of the product, were dismissed by Sherlock: "No. We've decided we're going to do this as Sega. We're not making a decision based on anything else at this point." However, following the court's decision, several companies have begun proceedings to halt Japanese versions of their wares reaching Europe, including Honda motorcycles.

Whatever else, the import market remains a small fraction of the overall UK videogames scene. "It's two different markets," pointed out another importer. "The import guys are never going to buy PAL machines anyway. No hardcore import guy is ever going to ring Sega UK and say they've got a problem."

With just over a thousand Dreamcasts in the UK, why is Sega coming down so hard on importers? And if it didn't want the early adopters to hanker after its desirable device, then perhaps it shouldn't have told them about it...







APPLE COMES OUT TO PLAY

The new G3 is set to take Mac gaming into the next millennium

Macintosh gaming's protracted period as the poor relation to the PC may be coming to an end – albeit several years too late. At January's Macworld Expo in San Francisco, Apple's interim CEO Steve Jobs announced a new generation of the successful G3 Macintosh line to take the brand into the next century, and to carry forward Apple's fresh commitment to the Mac gaming platform. Just don't mention the Sprockets project (**E**39)...

Although the new clock speeds of 350 and 450MHz are significant steps forward (and the iMac-alike casing is certainly eye-catching), the real advance of interest to the games player is that Apple has chosen to include ATI's new Rage 128 graphics chipset as standard.

G force

Carrying a hefty 16Mb of video memory, the Rage 128 is capable of impressive 2D and 3D performance – the former with resolutions up to 1,920x1,200 in 32bit colour. That colour depth is also available for 3D graphics, giving both the Rage 128 and the new G3 a significant advantage over PCs equipped with 3Dfx's Voodoo chipset. However, Apple's proud demonstration of a 450MHz G3 Mac achieving a 20 per cent higher framerate than a PII 450MHz Voodoo 2 PC seems a little pointless in the face of 3Dfx's imminent Voodoo 3 and PowerVR's new 250 (see **E**67). But Jobs, ever the showman, had further announcements to surprise attendees.

"I'm here because Apple has finally got its act together regarding 3D graphics," were **John Carmack**'s words as he prepared to demonstrate the Mac version of id's *Quake III: Arena* (see p38). As part of Apple's renewed commitment to the Mac as a gaming platform id is running simultaneous development of its surefire hit. Carmack also claimed that only a scarcely believable 15K of Mac-specific code was required to port the game from the PC.

The announcement of a Macintosh version of Silicon Graphics OpenGL graphics API (extensively supported on the PC) adds further momentum to Apple's bandwagon – the only cloud on the horizon being the dark memory of previous 'commitments' to gaming.

Meanwhile an extensive list of PC hits *en route* to the G3 was announced, including *Tomb Raider III*, *Sin*, *Battlezone*, *Heretic II* and *Falcon 4*. However, it's clear that more games need to follow the example of *Quake III* and be concurrently released on PC and Mac before Apple's machine can be taken seriously as a gaming platform.

Apple bites Sony

Macworld's final – and most surprising – salvo fired off into the realm of mainstream gaming came from Connectix, previously known for its *Virtual PC* emulation package for the Mac. Tagged *Virtual Game Station*, Connectix's latest application is nothing less than a fully functional – and seemingly entirely legal – PlayStation emulator for the Mac.

At time of press Sony's official response was 'no comment', but that's unlikely to be the case for long. It would seem, then, that **Edge**'s recent plea for Sony to address the issue of PlayStation emulation (**E**66) has been answered, via the perfectly law-abiding route of reverse engineering. And further fanning the flames is the rumour that Connectix is considering a PC port of its controversial package. The ball is most definitely in Sony's court.

iMac is now available in five fruity flavours




Apple is seeking to regain the computing high-ground with its attractive new G3




Id's *Quake III: Arena* is now on course for a simultaneous Mac and PC release thanks to the G3

GAME ON FOR UK CONSUMER SHOW

With the market bigger than ever, a public videogame exhibition is planned for the autumn

Miller Freeman, the company responsible for organising the European Computer Trade Show (ECTS), is planning a sister event to take place at the end of the year, but aimed squarely at the general public. Staged at a London location, the show is hoped to fill the gap once occupied by exhibitions such as the defunct Future Entertainment Show.

According to a spokesman for Miller Freeman, the idea for the new event was born following ECTS '98. "Several people felt that they would like to get their products in front of the consumer, in a dedicated event," he explained. "We have spoken to them about what kind of format they would like it to take, and are currently putting a proposal together."

Given the current buoyancy of the European and UK games markets, it could well be time for such an event to return. Miller Freeman's spokesman said that several games companies have been "very, very positive" about a public version of ECTS. Those in need of further information should contact Miller Freeman on 0181 987 7727. **Edge** will feature updates on the story as they happen.

m Miller Freeman



It looks as though gamers will soon be encouraged to indulge their obsession in public again

PSYGNOSIS GOING BACK TO LIVERPOOL

Last year it was Manchester, now the axe falls on San Francisco



Following the loss of its Manchester office (E65), Psygnosis has shifted the focus of cost-cutting to its US division. First to go was the San Francisco office, which was totally shut down. Further losses were experienced at the nearby Foster City offices where control of US operations was repatriated to Psygnosis' worldwide headquarters in Liverpool. Around 20 staff will lose their jobs in San Francisco with another 34 lost from Foster City over the next four months. Gary Johnson, MD of Psygnosis worldwide, emphasised that development of product in North America remained a key component of the company's plans. An announcement about its new US distributor is expected soon. The closures were not expected to affect any current projects. However, the consolidation of its west coast operations robs Psygnosis of any development capacity in the US.

N64 UPGRADES AND SUCCESSORS

With Dreamcast out and PlayStation 2 rumoured, where does that leave Nintendo?



Following this screenshot's surprise New Year appearance on Nintendo of America's Website (www.nintendo.com), Rare has confirmed that *Donkey Kong 64* is well into development. A release date has yet to be confirmed, but is expected to land somewhere in the fourth quarter. Typically, Rare is playing its cards close to its chest and is yet to impart any solid information about the gameplay details

Nintendo of America president Minoru Arakawa has recently hinted at the directions the company is considering for its successor to the N64. Explaining that its R&D teams were currently considering all types of storage media, he revealed that Nintendo was seriously evaluating whether to continue with cartridge-based consoles or switch to disc-based systems such as DVD. Arakawa-san also stated that he did not expect the system to be ready until 2000 or 2001 at the earliest.

In other developments, NCL president Hiroshi Yamauchi announced that Nintendo is on the verge of releasing new online capacity for the N64. The add-on peripheral features an internal modem for games and Internet access. The modem is not related to the on-off 64DD, although potential for network capacity is included in its spec sheet. Connectivity is an important part in Yamauchi-san's vision of the future of gaming and it seems certain to play an important role in Nintendo's strategic thinking over the next few years.

CUTTING EDGE

Dreamcast gets gamers online
Initial take-up for Dreamcast's Internet service is encouraging, according to Sega. With more than 100,000 users connected, it could be the key to kick starting the console's slightly understated launch. With this in mind Sega has announced it will extend the free usage period until April.

***Bio-Hazard* for N64?**
A possible port for Capcom's successful horror franchise has been hinted at by head of R&D Yoshiki Okamoto. In an interview he admitted the scenario for a *Bio-Hazard* title on Nintendo's console is already written. The official Capcom line remains "no comment," however.

Neo Geo Pocket hits the UK
For those (few) without Game Boys, SNK's 16bit portable is now available in the UK with five launch titles including *King of Fighters* and *Samurai Spirits*. It will retail for £50. Another 25 titles will follow over the next few months.

Exporters off to Tokyo Game Show
UK software companies with a modicum of ambition are preparing for the Tokyo Game Show in March. To help them along, the 'Exports to Japan' unit of the DTI is organising a subsidised trade mission. You'll have to be very quick, though – the deadline for applications is January 29. Contact: philip.thacker@btinternet.com

***Bloodshot* killed off**
With the current vogue for gore, the name was right, but after focusing on its 1999 releases Acclaim decided to pull the plug on *Bloodshot*. It will be concentrating on N64 titles instead.

VGA boxing clever
With TV screens failing to fulfil the potential of Dreamcast's graphical power, Sega has released the VGA box in Japan. The unit allows users to utilise their hi-res VGA-compatible PC monitors, and **Edge** will test it next issue.

Argonaut's dog slips out
With Sega tight-lipped over *Red Dog*, it was left to Argonaut's **Jez San** to spill the beans. A bit "*StarFox* in a tank" was his concise description for this futuristic shooting alien game. Expect it to launch alongside Dreamcast in the UK.

PRESCREEN

EDGE PREMIERES INTERACTIVE ENTERTAINMENT'S FRESHEST FACES

When once is not enough

Sequel savvy

At first glance it might seem odd that **Edge**, a magazine occasionally vehement in its opposition to endless sequels, should give such prominance to Polyphony's *Gran Turismo 2* and id's *Quake III: Arena*, as is the case this issue. However, for these games it's more than desirable to see what will be achieved by a follow-up, such is the pedigree of the original title and developer. There's a certain fascination in witnessing how a fine piece of work is expanded by its creator – the mind boggles at the prospect of where Miyamoto will lead *Mario* next, for example.

It's obvious that some games either don't need or don't deserve a sequel. *Tomb Raider II* and *III* may have done wonders for Eidos and Core's bottom lines, but did little to build on the achievements of the original concept, undoubtedly playable though they were. The videogame industry may be – just about – getting over its Hollywood fixation, but it still mirrors the movie industry in other ways. Just as with films, too many good games have their reputations spoiled by lazy sequels that could be so much more.

The line is a fine one. If a follow-up steps too swiftly on the heels of its predecessor, then it's clear that the publisher is just cashing in (of these, sports series such as EA's *FIFA* are obviously the worst offenders). However, give the development team an extended period to enhance and revamp their title and you risk being overtaken by newer, flashier products. Notably, bad games are never given the chance to improve – only the big sellers are quickly hauled back into the shops to generate more cash. Sadly, the important thing to remember is that the only reason publishers can sell more of the same is because punters are willing to buy it.

Whatever the game is, from *Gran Turismo* to *Tomb Raider*, if it's been purchased and enjoyed by enough people, then a sequel is pretty much inevitable. But can you have too much of a good thing? Core's series proves that perhaps you can. It's a shame that it takes a title twice to strike the massmarket before notice is taken, by which time the hardcore gamers have moved on.

Thankfully there are just enough Miyamotos, Yamauchis, Carmacks and Molyneuxs to make sure that at least some of the sequels are worth buying. And that's because they've earned the respect of press and players the world over, leaving the money men little option but to heed the creatives' wishes.







The prevalence of sequels is a contentious issue, because even the most apparently opportunistic of them, such as *Tomb Raider III* and the *FIFA* titles, are solidly playable. *Quake III* is next to arrive

Edge's most wanted

Winter warmers







Jet Force Gemini	Shenmue	Gran Turismo 2	Power Stone
(N64) Rare	(DC) Sega	(PlayStation) Sony	(DC) Capcom
Featuring multiple playable characters and perhaps the finest visuals yet to grace NCL's 64bit box, Rare's near-complete alien blaster looks unmissable.	Yu Suzuki hardly balks at a challenge, but this will surely stretch his talents further than any title to date. A potential landmark experience.	**Edge** has seen it, talked to the team behind it and played it enough to realise that this year there's only one racing game worth waiting for. Supreme.	Proving just how close the relationship between Dreamcast and Naomi is, Capcom's promising beat 'em up should arrive before the end of February.

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PRESCREEN ALPHAS

WITH RARE'S LATEST OPUS ALMOST READY, N64 OWNERS ARE SET FOR A REWARDING YEAR...

JET FORCE GEMINI

FORMAT: **NINTENDO 64** DEVELOPER: **RARE**













The latest batch of *JFG* images to come out of Twycross' favourite N64 coding and publishing outfit is, if anything, more intriguing than the first. Whereas in most cases a game's direction can (within reason) be worked out by examining its screenshots, on present form Rare's 3D space-age blast 'em up seems to leave an awful lot of gameplay issues open for discussion. **Edge** awaits its release intently

CARMAGEDDON 2

FORMAT: **NINTENDO 64** DEVELOPER: **SCI**








Having already scuffed up the desired-for amount of publicity upon its release on the PC late last year, the sequel to SCI's blood-swathed driving game is now careering towards the N64 and PlayStation. And in some respects it's more suited to a console environment, with its fundamentally warped premise and unorthodox approach to physics. Quite apart from the game's controversial content, this conversion looks technically adept on both 32 and 64bit.

MARIO GOLF

FORMAT: **NINTENDO 64** DEVELOPER: **CAMELOT**






Despite the lightweight exterior, Nintendo has introduced Camelot, creator of *Hot Shot Golf* for the PlayStation, to ensure realistic modelling for the Italian plumber's latest excursion into the world of drivers and putters. Six courses are available, giving Japanese gamers 108 holes over which to indulge their two favourite obsessions. Initial characters include Luigi and Princess Peach, with others becoming unlocked as the game progresses.

PSYCHIC FORCE 2012

FORMAT: **DREAMCAST** DEVELOPER: **TAITO**

With versions of *Psychic Force* out on the PlayStation and in arcades, the progress of this ambitious 360-degree fighting Dreamcast game became apparent at the Tokyo Game Show. With ten characters, eight of which are playable, its impact seems likely to depend on the balance and speed generated between the camera-work and the gameplay.










HYDRO THUNDER

FORMAT: **DREAMCAST** DEVELOPER: **MIDWAY**

Midway is believed to have a number of Dreamcast titles in the works (including *another* version of *Mortal Kombat*), but this is one of the first to surface. A conversion from the new coin-op of the same name, *Hydro Thunder* is – you guessed it – a powerboat racing game. It's unlikely to make the console's western launch, but should appear some time in early 2000.







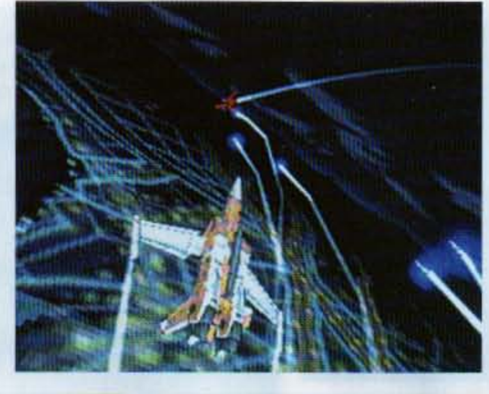




DIGITAL MISSION

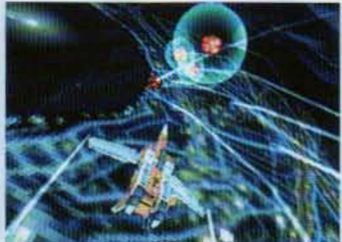
FORMAT: **PLAYSTATION** DEVELOPER: **BANDAI**











With flying games soon to be one of the hot new genres in Japan, Bandai is attempting something more original with *Digital Mission*: think *Ace Combat 3* meets *Mighty Morphin' Power Rangers*. Much of the development work has focused on refining the heavy number crunching needed to fully implement the dynamic camera and missile lock-on systems.

LE MANS 24 HOURS

Eutechnyx may have slid off course with *Max Power Racing* (see p82), but the Newcastle-based developer is rather serious about its next PlayStation project, and from these screenshots, it has reason to be. Based on the yearly gruelling event in France, the game promises to include all of the GT1 and GT2 sportscars, while you'd expect an option to race the full 24-hour marathon. **Edge** will have more info and a full preview next issue.







CYBERNETIC EMPIRE

FORMAT: **PLAYSTATION** DEVELOPER: **WOLF TEAM (TELENET JAPAN)**

It's been a long time since Wolf Team produced games for the Mega Drive, but now it's back with *Cybernetic Empire*, a 3D thirdperson action adventure that cynics might suggest resembles a certain high-profile game from Konami. Various gameplay and controller innovations are promised, and consequently both Dual Shock analogue sticks will be used for moving and looking around. An intriguing energy ball will also encourage you to use your brains before your bullets.









SHOGUN TOTAL WAR

FORMAT: **PC** DEVELOPER: **CREATIVE ASSEMBLY**



As it approaches its projected March release, there is still little out there that should frighten realtime strategy title *Shogun Total War* into retreating back to the development studio. It's a highly ambitious title that places you in Japan, 1542, where you control thousands of samurai as they fight the factions of rival feudal lords. If getting close to the action sounds a little messy, then you can always just concentrate on the strategy aspect. Or vice versa. Or both.













DISCWORLD NOIR

FORMAT: **PC/PLAYSTATION** DEVELOPER: **PERFECT ENTERTAINMENT**









All film noir starts with the bourbon-soaked private dick meeting the hot dame on a rainy night, and the latest interactive episode of Terry Pratchett's *Discworld* is no different. It looks great, and atmosphere is guaranteed, but whether playing a hero called Lewton on the lonely streets of Ankh-Morpork is going to match Bogart in 'The Big Sleep' remains another question.

DAIKATANA

FORMAT: **PC** DEVELOPER: **ION STORM**





Although a large number of the development team have now jumped ship (see news, **E**67), Ion Storm's massively anticipated firstperson shoot 'em up is nigh-on complete. Through the course of its gestation, *Daikatana* has been both derided and exalted by the press, as various versions have surfaced at successive public showings. The potential is there for a fine experience, although *Half-Life* has shifted the goalposts somewhat.





PRINCE NASEEM BOXING

FORMAT: **PC/PLAYSTATION** DEVELOPER: **CODEMASTERS**









Straight outta Sheffield comes the Prince, probably the lightest fighter ever to endorse a boxing game. Codemasters has concentrated on blending high levels of player control here, with advanced animation modelling to create a dynamic fighting environment. Digital pugilists can choose from arcade or championship showcase modes and up to 16 fighters, while cowards can opt to manage their lad's career and remain outside the ring.

DESCENT 3

FORMAT: **PC** DEVELOPER: **INTERPLAY**





The third in Interplay's disorientating space shooter series sees the core action remaining essentially unchanged, but introduces outdoor levels and specific mission objectives (throwing out the simplistic and frequently tiresome find-the-key mechanics of former games). New weapons, meanwhile, include a napalm launcher and super laser.

DAYTONA USA 2 POWER EDITION

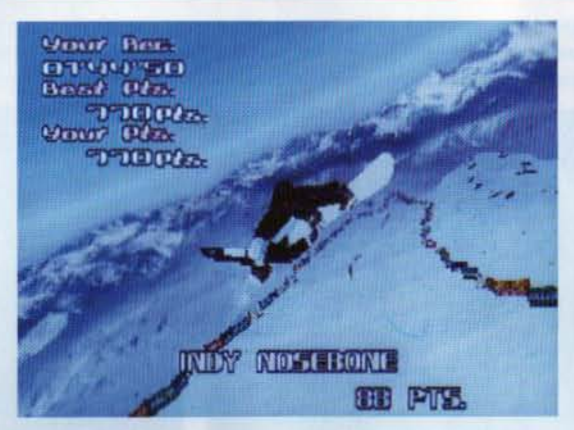
This updated version of Sega's second coin-op interpretation of American circuit racing is an improvement over last year's release: from these shots you'll notice that nostalgic fans of *Daytona USA* finally get the opportunity to compete in the Hornet car from the original version. But what you won't see is that all three tracks can now be played in succession and that the cabinet can be linked to a PC, allowing for extensive network play.

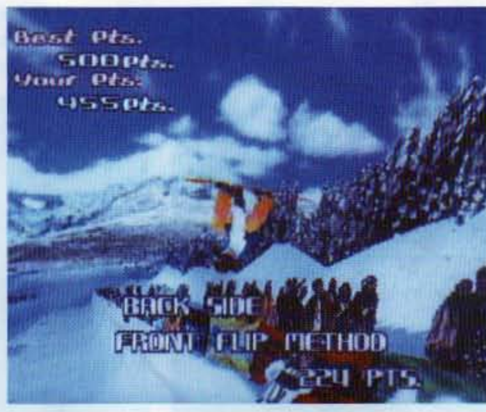




TRICKY SLIDERS

FORMAT: **PLAYSTATION** DEVELOPER: **CAPCOM**











With brands such as *1080°* and *Cool Boarders* remaining strong in Europe, *Tricky Sliders* is the first new title of the season for Japanese snowboarders. However, in a game seemingly lacking graphical or control innovations, the focus switches to clothing and equipment sponsorship. Fashion-conscious gamers might be tempted by the extended character customisation features.

THRILL DRIVE

FORMAT: **ARCADE** DEVELOPER: **KONAMI**

Powered by the company's Cobra board, Konami's latest driving coin-op gives you a choice of three courses (US, Europe and Japan) and seven vehicles (a Volvo estate and Fiat Barchetta among them). You then have to find your way through the traffic; victory depends on your speed, technical ability, choice of route and magnitude of accidents caused.











RC STUNT COPTER

FORMAT: **PLAYSTATION** DEVELOPER: **SHINY ENTERTAINMENT**

Having suffered slight delays, Shiny's radio-controlled helicopter sim is finally getting ready for lift off. It's the sort of title that appeals to a highly specialist group of individuals, yet given its addictive quality, **Edge** would be surprised if it doesn't appeal to a far wider audience if they get a chance to try it out.







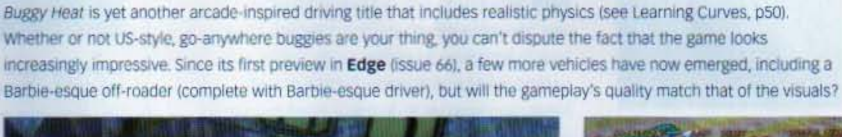




BUGGY HEAT

FORMAT: **DREAMCAST** DEVELOPER: **CRI**




Buggy Heat is yet another arcade-inspired driving title that includes realistic physics (see Learning Curves, p50). Whether or not US-style, go-anywhere buggies are your thing, you can't dispute the fact that the game looks increasingly impressive. Since its first preview in **Edge** (issue 66), a few more vehicles have now emerged, including a Barbie-esque off-roader (complete with Barbie-esque driver), but will the gameplay's quality match that of the visuals?









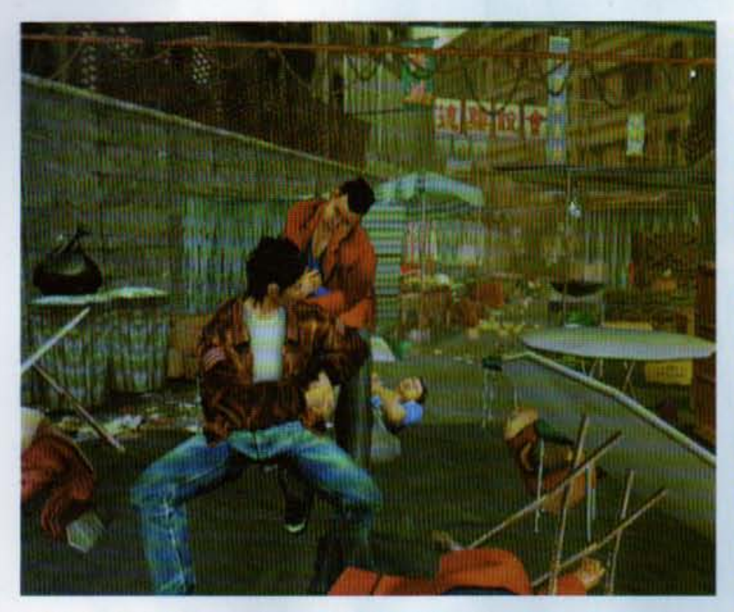






SHENMUE

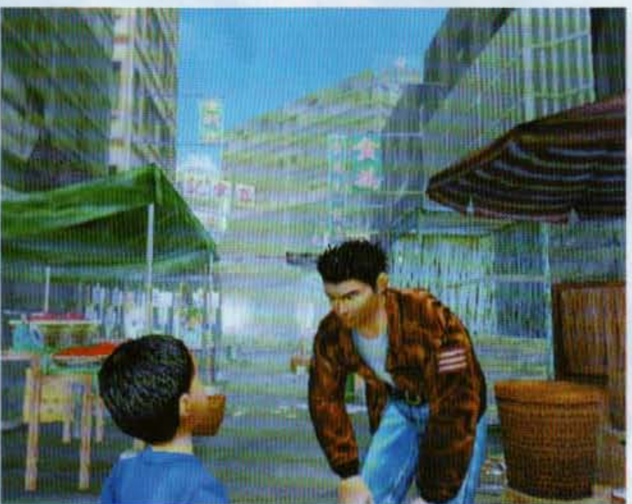
Sonic Adventure may already be provoking gasps of awe in Japan, but it could prove a simple taster compared to Yu Suzuki's breathtakingly epic RPG



The player must interrogate an extensive number of characters in order to obtain clues and quest details. There are around 300 individuals in the game







Both character animation and background scenery are exquisitely detailed – Suzuki's intention is to mimic real life as closely as possible





The player has an extensive range of moves and actions which reflect Sega's concern for realism

Format: **Dreamcast**

Publisher: **Sega**

Developer: **In-house**

Release: **Spring**

Origin: **Japan**

Although many questions have been raised about Sega and its Dreamcast project of late, one thing is certain – the company knows how to introduce its games to the public. In a packed Yokohama National Exhibition Hall, legendary designer Yu Suzuki – aided by two TV presenters, three massive video-projection screens and a small orchestra – revealed what could be one of the most ambitious and important videogame endeavours of the decade.

Shenmue is an RPG in which the player takes on the role of Ryo Hazuki, and must explore a large, bustling Chinese town. Clues and hints to the nature of the quest can be obtained by talking to NPCs (of which there are around 300) and you must acquire money in order to purchase essential equipment. It would appear the RPG rulebook, then, has been rigidly adhered to.

But it is the magnificent naturalistic detail which looks likely to set this title apart from its predecessors. Yu Suzuki wants the game to become part of a players' life, indistinguishable from their real experiences – and with this aim in mind has invested each element of *Shenmue* with unparalleled craftsmanship.

Take the background scenery. To capture the essence of Chinese streetlife as closely as possible, the artists actually made several trips to China and Hong Kong to study the bustling urban menagerie for themselves. This experience is clearly discernable in the game: rugged wooden huts spill out above narrow alleyways cluttered with litter and cardboard boxes; modernist towerblocks loom in the background; minute details such as telephone poles, street signs, and rubber tyres roped to the sides of docked boats enliven each scene.

This concern with realism and detail appears to infuse every corner of the game. Of the 1,200 rooms and locations accessible to the player, all are filled with clutter. Non-player characters don't simply stand to attention waiting to be approached, they engage in everyday activities and have to be interrupted. Similarly, to earn money, you must take on menial chores or gamble; you can't simply smash a box or vase to reveal a coin. It's all part of Suzuki's plan to create, as near as possible, a believable experience.

Elsewhere, the designers have attempted to flesh out the RPG genre in fresh directions. The Quick Time Event is a new feature in which players must make fast decisions in response to









There are 1,200 rooms for the player to visit, and an impressive range of disparate locations within the oriental urban setting







An impressively versatile camera provides a number of angles from which to view the action. The aim is to keep the player immersed

certain situations. For example, while running though a series of alleyways, an arrow will point out forthcoming hazards (wooden boxes in your path, for instance), requiring swift reflexes. Also, there's the Quick Time Battle mode, which players enter each time they're challenged to a fight, and which gives them a range of street fighting moves to call upon.

Finally, Suzuki's most interesting claim is that *Shenmue* is actually a 4D game – it has its own dynamic time and environment systems. This means of course that, during the game, days become nights (and vice versa), while weather turns from sunny warmth to wintry snowstorms.

It's clear, then, that Sega is determined to break out of the arcade-conversion cycle which

Yu Suzuki's most interesting claim is that ***Shenmue* is actually a 4D game** – it has its own **dynamic time and environment systems**

Indeed, character animation is at the forefront of this painstaking quest for realism. Motion capture has been used extensively to create ultra-smooth movement, with a martial arts expert employed for the combat sequences. Sega is also boasting that Dreamcast's graphics processing is so powerful, *Shenmue* artists have been able to capture intricate hand movements.

characterised in-house development on the Saturn and discouraged potential buyers looking for more varied experiences. *Shenmue* is a vast, complex and fascinating exercise, and if the gameplay finds a compelling way to exist within this incredibly laissez faire environment, it will be a key title, not only for Dreamcast, but also for videogaming in general.





Sega has used motion capture exhaustively to ensure that character movement is fluid



POWER STONE

Known for its dedication to the bitmap-based fighting game, it's almost ironic that Capcom is currently pushing the boundaries of 3D beat 'em up development with its latest effort







A muscular behemoth (above) highlights another Capcom favourite: epic (and often pyrotechnic) clashes between large and small antagonists



Capcom has long championed multi-hit, varied combo attacks. It's no surprise, then, that *Power Stone* encourages such dextrous exchanges

While *Virtua Fighter 3tb* and *Tekken 3* represent the beat 'em up genre at its evolutionary best, Capcom's *Power Stone* shows an admirable degree of revolutionary intent. Like *Ehrgiez* (p80), *Power Stone* eschews traditional toe-to-toe pugilism for fully explorable 3D arenas and interactive scenery.

With stunning visuals testifying to its Naomi board heritage, *Power Stone* exemplifies Sega's vision of arcade/console cross pollination. Although early indications show that Capcom's conversion will miss some of its arcade counterpart's polish, the differences between the two incarnations appear minor at present.

While *Ehrgeiz* and *Power Stone* share design principles and, to a lesser degree, play mechanics, the latter is tangibly bolder, and appreciably more sophisticated. While the few multilevelled stages of Dream Factory's title appear almost as afterthoughts at times, Capcom's are an integral part of any given bout. From using a fountain as cover from an aggressive opponent, to jump-kicking from a table, 'background' furniture offers a rich stock of props and moves for a player to use.

Format: **Dreamcast**

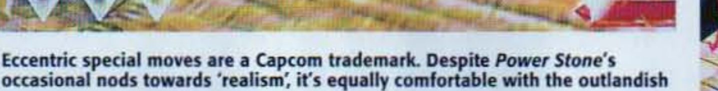
Publisher: **Capcom**

Developer: **In-house**

Release: **TBA**

Origin: **Japan**





Eccentric special moves are a Capcom trademark. Despite *Power Stone*'s occasional nods towards 'realism', it's equally comfortable with the outlandish







In true Capcom style, certain moves are boldly, brightly emphasised







Only a slight reduction in texture quality prevents Dreamcast *Power Stone* from being a dead ringer for its arcade parent

Further to this, Capcom has made the logical progression of adding 'interactive' scenery. Certain objects can be thrown, others wielded as crude (yet effective) cudgels. Those familiar with *Double Dragon* and *Streets of Rage* will no doubt acknowledge the strategic element this can introduce. In one stage, for example, a lamp-post can be uprooted and used to pummel an opponent from a tactically beneficial range.

Continuing its experimentation with power-ups in a beat 'em up context, Capcom has included ability-enhancing special objects for players to find. These eponymous 'Power Stones' imbue the possessor with an additional range of moves. As in *X-Men Vs Street Fighter*, these can be stolen or lost during the course of a battle. Should you obtain three at any one point, a super-powerful 'ultimate' attack is the reward.

Power Stone also suggests that Capcom is losing patience with its six-button – three punches, three kicks, of varying strength – *Street Fighter* control interface. For this franchise-to-be, it introduces a more approachable three-button interface. Representing jump, punch and kick respectively, these may be combined in order to access complex attacks, much like *Virtua Fighter*. While this isn't innovative, it certainly makes *Power Stone* more accessible to the casual gamer.

Capcom's most iconoclastic move, however, is to purposely omit a 'block' button. Instead, players are compelled to avoid or 'counter' blows by pushing or pulling their opponents. While many purists – particularly *Street Fighter* devotees who favour block-based strategies – may regard this as heresy, it's a forward-thinking decision for Capcom. Though the tactic of blocking any blow simply by raising your arm has become a beat 'em up cliché, it could descend into farce when the combatants begin to smack each other about with chairs and lamp-posts. The Japanese softco should be saluted for challenging such a genre mainstay.

Power Stone's smooth conversion to Dreamcast will aid Sega's marketing efforts no end. Despite the blistering *Virtua Fighter 3* conversion's undoubted virtues, hardcore PlayStation exponents still argue, subjectively, that *Tekken 3* is the better of the pair. *Power Stone*, as a near arcade-perfect port of a new style of fighting game, could assist in vindicating Sega's claim of next-generation superiority with hard, software-based proof.

Blocking by raising an arm **has become a cliché,** but it would be farcical when opponents **smack each other about with chairs and lamp-posts**





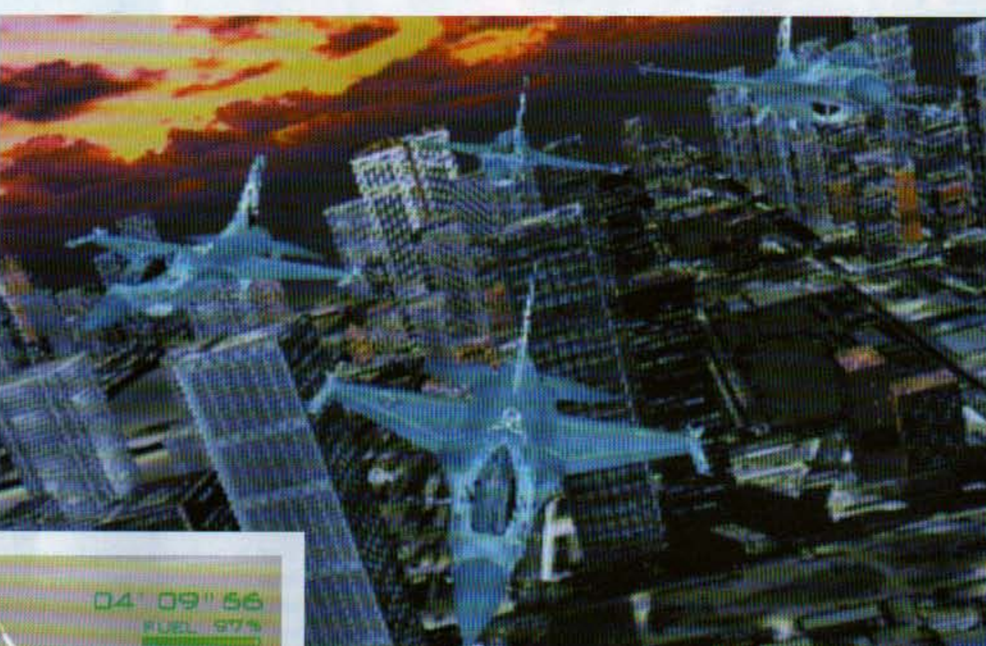
Weapon-based combat plays a large part in *Power Stone*'s affrays

FLIGHT SHOOTING

Konami's beautiful, arcade-oriented flight sim is hotly tipped as being one of the Dreamcast's finest thirdparty titles of 1999. As these shots attest, such praise is justified







Although *Flight Shooting*, like many of its 3D ilk, has many 'bald' patches where textures represent low buildings, its cities are lavishly furnished nevertheless

Naturally, Dreamcast *can* suffer from draw-distance limitations, despite its poly-pushing capacity. Will *Ace Combat 3* match this? Of course not

Format: **Dreamcast**

Publisher: **Konami**

Developer: **In-house**

Release: **TBA**

Origin: **Japan**

The flight sim is, understandably, commonly seen as the sole preserve of the PC owner, but what of arcade-oriented, console-based interpretations? Bar Namco's *Ace Combat* series – soon to attain trilogy status – and CRI's *Aero Dancing* (see p35), **Edge** would struggle to name any exponent of this sub-genre that wasn't received with apathy.

Flight Shooting – and to a lesser extent, Namco's third *Ace Combat* game – could generate interest in this potentially exciting game style. Like Konami stablemate *Aero Gauge* – *Flight Shooting*'s N64-based predecessor – it involves airborne combat, with players engaging increasingly skilled opponents in willful exchanges of aerial combat. But whereas *Aero Gauge* was a tepid affair, its visuals mediocre, this successor offers graphics on a par with, if not better than, PC-based counterparts.

The importance of gameplay over visual niceties is a well-established understanding, but it would be churlish to ignore the immersive qualities of good aesthetics. *Flight Shooting* is, in short, an impressive game to behold.

Notably, its designers have also included welcome incidental touches, such as shadows for buildings. Details like these blur the boundaries between the two mental 'states' in which a player exists while playing games: 'I am here,' and 'I am there' – the latter representing the distinction between 'game' world and 'real' world. Gameplay aside, *Flight Shooting*'s apparent attention to detail at this early stage alludes to an incredibly convincing visual experience.





Choosing an internal view gives you a variety of extra gauges and miscellaneous onscreen information. Disposable, but fun



Chopper sorties will also play a large part in *Flight Shooting*'s many missions, providing a welcome line in variety





Can a videogame communicate a feeling of vertigo? Early images indicate that this is not for the faint-hearted, particularly given the chance to pilot the Stealth Bomber (top)











The default external view is impressive, especially when viewed as a spectator. Purists, however, will no doubt opt for the cockpit



There are many types of aircraft available including combat planes such as the F-14 (top) and the RF-M Rafale (above)

Whereas *Aero Gauge* **was a tepid affair**, this successor offers graphics on a par with, if **not better than, PC-based counterparts**

It's unclear as yet just how Konami intends to structure *Flight Shooting*'s action. **Edge** is aware of two 'main' play modes. The first will offer the titular 'flight' and 'shooting', ironically enough. The second, perhaps in a mischievous nod towards Dreamcast rival *Aero Dancing*, will test a player's aerial skills in true *PilotWings* tradition. Being a Japanese production, it's a fair bet that a 'story' option involving linear levels played to a background narrative is likely, too.

Edge has witnessed three early stages at the time of going to press, taking place in a mountain range, a desert situated somewhere in Egypt, and a snow-clad landscape. In an impressive effort, 30 different styles of vertically vigorous vehicles have been created so far. Depending on the mission in hand, you can be required to pilot a helicopter, bomber, transport craft, attack fighter or 'stealth' craft. Students of military aviation will no doubt be impressed by *Flight Shooting*'s cast list, too, which includes real-life models such as the F-15 Strike Eagle, RF-M Rafale, EF2000 Typhoon and the F-14 Tomcat, to name a few.

But it's the rumoured multiplayer aspect of the game that **Edge** finds of greatest interest. In principle, using Dreamcast's internal modem, Konami could (and, most likely, will) include support for Net-based dogfights. If Sega is seeking additional means by which to endear the Dreamcast to a potential online fraternity, *Flight Shooting* presents itself, at its current stage of development, as an alluring prospect.

When the success of VR-1's workmanlike *Air Attack* on Wireplay's UK service is taken into consideration – in a country notable for its precious few 'dedicated' online gamers – it's arguable that Konami should regard multiplayer functionality as a requisite rather than a 'bolt on' option.

KINGPIN

Xatrix takes the *Quake II* engine and throws in surface-detection sound to create its own brand of gritty urban realism. This descent into gangland violence isn't for the faint-hearted







Xatrix has toiled to make hand-to-hand combat as realistic as possible. The result, as these screenshots so evidently attest, is an unsettling experience



***Kingpin* is yet another title that uses a modified version of the *Quake II* engine – although this looks like being the most capable update yet**

An overcast night, dimly lit alleyways. Shadowy figures warm themselves around street fires, their voices mingling with the sound of distant sirens. A couple are kissing behind a fence. The man comes towards you. "You better step the fuck off!" he shouts. You draw the lead pipe from beneath your coat and cave in the side of his face, which turns to mush. "You're gonna fuckin' die!" he screams, and comes back at you. Seconds later, they both lie dead on the concrete in a pool of blood. The music is pumping, your blood is up. The sirens get louder.

This is not an average firstperson shooter. It's also not what you'd expect from Xatrix, the creator of the tongue-in-cheek *Redneck Rampage*. Headed by veteran developer **Drew Markham**, the Santa-Monica based codeshop is justifiably proud of *Kingpin* – a powerful mix of technical innovation and gutsy design.

Set in all the darkest corners of the inner city, the game plunges you into a criminal underworld with a mission to gather followers, money (to buy weapons) and information in your quest to usurp the Kingpin – a crime lord whose gangs rule the warehouses, alleyways and rundown tenements of his turf. It's a setting that begs for a level of realism uncommon in this genre – not to mention in the studios of Xatrix itself. Enabling Xatrix to achieve that realism is a modified version of id Software's *Quake II* engine and appropriately creepy sound effects.

"Using the *Quake II* engine gave us a head start, and allowed us to concentrate on the important stuff," Markham reveals. "But we didn't just take it and leave it at that – we 'unrealised' it

Format: **PC**

Publisher: **Interplay**

Developer: **Xatrix**

Release: **April**

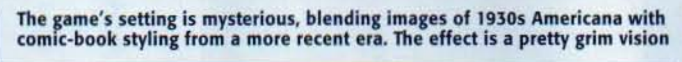
Origin: **US**











The game's setting is mysterious, blending images of 1930s Americana with comic-book styling from a more recent era. The effect is a pretty grim vision

– added procedural smoke, fire and lens flare – it's something you're obliged to do now, every time someone sets the bar higher."

The result is a believable world that leaves little to the imagination. The tenement buildings have been painstakingly constructed – with every conceivable detail – from the obvious (apartments with TVs and toasters) to urine-stained bathrooms and blocked-up toilets. The commitment to realism extends as much to the inhabitants as the environment – the character models are extremely detailed, and in another self-made addition to the *Quake* engine, the texture maps on the models reflect damage instantly and permanently. It's a somewhat ghoulish touch – but highly effective.

Combat too is a departure from the norm. As well as having access to a variety of missile weapons, players can get up close and personal with crowbars, motorcycle chains, baseball bats and lead piping. Judging by the poor feel and control exhibited by hand-to-hand weapons in other firstperson titles, you'd be forgiven for dreading their use, but here it works. Collision is correctly calculated, and every blow is accompanied by a satisfying crunch as the victim stumbles backwards.

Where Xatrix has perhaps made the most progress, however, is in its use of sound. Markham and his team have a added a simple, but effective feature. "It's surface detection," he explains. "Every object in the game has a material definition to it – wherever you see metal, you hear metal when you touch it, or walk on it. Each surface has its own resonant value that modifies the sounds of ricochet bullets, footsteps, or debris accordingly."

It's not just sound effects that are put to good use – speech also plays an important role. On one level, it adds to the atmosphere – with gutter-mouthed gangsters squaring up to one another – but it also forms a vital part of gameplay. As you approach a character, you select an attitude ranging from hostile, through neutral to friendly, which determines the reaction of the NPCs. About half the inhabitants of *Kingpin* are neutral, and many can be persuaded to help you, given the right approach.

With *Half-Life* redefining the genre, it may seem that *Kingpin*, with its accent on violence, is something of a throwback, but that would be to miss the point. What Xatrix is attempting to do is to provide a world rich with detail and realism with enough nuances to elevate it well above the *Quake* clones. Essentially a level-based, linear challenge, clever scripting (courtesy of a world clock that triggers key events) and a living, breathing environment should make for an arresting, powerful and, above all, believable, experience.

The **texture maps reflect damage** instantly and permanently. It's **a somewhat ghoulish touch** – but highly effective







Walking on different surfaces changes the accompanying sound effects. It's another step towards delivering a living, breathing gaming environment

WILD METAL COUNTRY

After the lurid excesses of *Silicon Valley* and the moral outrage surrounding *GTA*, DMA's next game is refreshingly simple: an animals-as-tanks, massively multiplayer shoot 'em up



While the PC version of *WMC* impresses, sadly plans for an N64 iteration seem to have been put on hold, at least for the foreseeable future



Although the control system for *WMC* is intentionally simple, detailed physics calculations give the tanks a wide repertoire of movement

Format: **PC**

Publisher: **Gremlin**

Developer: **DMA Design**

Release: **Spring**

Origin: **UK**

DMA Design: master of the madcap, creator of the curious, developer of the distinct. From *Lemmings* to *Grand Theft Auto*, Dundee's finest has delivered a string of titles which have managed to challenge both the conventions of videogame creation and the skills of those who play them. The last 18 months have seen DMA in an uncharacteristically productive mood, releasing *GTA*, *Body Harvest* and *Space Station Silicon Valley*, with *Tanktics* and the subject of this article, *Wild Metal Country*, soon to follow.

First revealed to the world in **E**60, *Wild Metal Country* is a hi-tech, high-fun tank battle game constructed atop the sturdy sub-structure of a powerful physics engine. This allows the action to take on a realistic look and feel, with shells following credible trajectories to blossom into effective explosions. With its PC release date now closing fast (although the planned N64 version seems to have disappeared without trace), **Edge** spoke to DMA Design's creative manager, **Gary Penn**, and *WMC* producer, **Chris Stamp**, to discover where nine months of rapid development had led to.

"Some cynics see *WMC* as multiplayer *Quake* in tanks, outdoors – and we can't be bothered to argue with that," says Penn. "We see *WMC* simply as the kind of digital toyset which should appeal to the old and the new: those who enjoy mastering new ways to play with toys and anyone keen on playing contemporary pretend war with sticks for guns – but in heavyweight tracked vehicles."

"*WMC* was developed with multiplayer very much in mind," adds Stamp, "IPX and Serial play are alive and well and we're looking at Internet play possibilities." When **Edge** visited DMA in summer '98, a linked version of the



All of the projectile weapons in *WMC* fire along realistic trajectories. Of course, if you happen to be armed with bouncing bombs, things can get very messy







Depth shading is used to enhance the sensation of playing in a vast, open combat arena, although landscape details are somewhat scarce







A diverse bunch of animals were deliberately chosen as the inspiration for the AI design, so that there is plenty to explore

game was playable and even at that stage proved highly promising.

Wild Metal Country's oneplayer game places the player in the role of a lone bounty hunter, risking all to salvage a collection of ancient power cores that will net untold wealth if successfully retrieved. Unfortunately, packs of intelligent guard tanks, left behind by the fallen Tehric Empire, stand watchful over the cores, and these custodians must be overcome in order to triumph.

DMA's team has themed the packs of tanks around various animals, to give each an attack and defence style of its own. "There's immense satisfaction to be had studying the different vehicles and coming to terms with their basic behaviour in order to overcome any fear before abusing them," explains Penn. "There are times when playing *WMC* is very much like taking part in some bizarre big game hunt."

He goes on to point out that, "Animal intelligence can be so extreme, so dramatic – far more flexible and potentially surprising than 'real' player intelligence. Your expectations are markedly different when you approach an animal – or a vehicle which is intended to be a lifeform like an animal – instead of a person or a vehicle that appears to be controlled by a person." However, DMA's recent penchant for sheep abuse, as featured in *Space Station Silicon Valley* and the forthcoming strategy game *Tanktics*, has not (yet) reached *WMC*.

The game is viewed in the thirdperson, and features a comprehensive control system which enables you to guide both the tank tracks and the turret independently. While it takes a little adjusting to, comfort can be drawn from knowing that the computer has to operate a similar system for its tanks, a feature designed to create a level playing field – unlike the battle arenas, which are formed in rolling valleys with hills and dips to hide among.

"*WMC* was **developed with multiplayer in mind**. IPX and Serial play are alive and well and we're looking at **Internet play possibilities**"

"We have tried to create something really immersive where you can explore and make things happen," insists Stamp. "There's all the usual stuff about extra weapons [including magnetic mines, bouncing shells and cluster bombs] and new and more difficult enemies and settings as you progress, but the reward is really in experiencing the game."





The animalistic tanks move around the game world in packs and flocks

FRAME GRIDE

It may not be the most high-profile prospect in the Dreamcast release list, but From Software's impressive visuals and off-beat gameplay demand attention







Taking advantage of Dreamcast's high poly count, *Frame Gride* features a wide variety of detailed, esoteric mechs – each adorned with a suitable array of outlandish protusions

After four years of PlayStation development, From Software is currently working on its first Dreamcast title, *Frame Gride*. Borrowing elements from PS precursor *Armoured Core*, *Frame Gride* caters for the near-fetish regard Japanese otaku hold for all things mech-oriented.

For the solitary gamer, a story mode provides a tale interspersed with battles. This is notable for the progressive improvement of the player's mechanoid. From Elemental Parts (such as arms, body and legs) to Material Parts (silver, ceramic, crystal), continued play reaps dividends for *Frame Gride*'s artificial antagonists. To satisfy the voracious completist urge of certain players, there are 'normal' and 'rare' versions of either. Similarly, each robot possesses a collection of four special 'slots' in which you place attribute-enhancing Liberate Stones.

These Liberate Stones, in turn, are divided into three different types. The first modifies the overall attributes of your robot, from a choice of fire, earth, wind and water. The second and third slots are used for powering up generic abilities, such as attack power, hit-point level and speed. The latter is used to contain 'special' powers, such as the ability to fly.

Frame Gride's Battle mode offers multiplayer battles on a series of levels opened through successful play in its solo guise. Available in splitscreen and online flavours, it's this option that **Edge** finds most appealing. Since playing games of this genre is a predominately lonely pursuit, it's refreshing to encounter a title that promises to further reward players by enabling them to pit mechs of their own construction against like-minded human rivals.

From Software is planning to include four individual singleplayer stories (although certain locations and plot elements will be common to each scenario), and the title's aforementioned multiplayer appeal is obvious. It's not a title that will set sales records outside its native Japan, but *Frame Gride* is an interesting prospect for the new console.



The game's subtle use of transparencies in its many explosions deserves much credit, and is a far cry from traditional bitmap monstrosities



In similar style to many other Dreamcast titles, *Frame Gride*'s prodigious draw distance is immediately striking, which serves to bring depth and atmosphere into the enormous arenas







Format: **Dreamcast**
Publisher: **TBA**
Developer: **From Software**
Release: **TBA**
Origin: **Japan**

MAKEN X

Gore, depravity and perversion are 1999's essential gaming bandwagons; the S&M nightmare world of *Maken X* sees Atlus jumping on all three

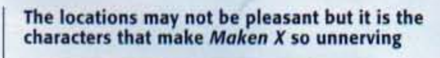












The locations may not be pleasant but it is the characters that make *Maken X* so unnerving



Format: **Dreamcast**

Publisher: **Atlus**

Developer: **In-house**

Release: **TBA**

Origin: **Japan**

Without a doubt, 1999 is going to be the year of the gross-out. Following the old yarn explaining 'How The Sea Became Salt', a bloaty brood of ever more grotesque horror adventures is mutating and pustulating within the soft belly of Dreamcast's release schedule. But where *BioHazard: Code Veronica* and *Carrier* deal with straightforward issues of zombies 'n' guts, Atlus' debut for the new console is turning out to be a far more sinister affair. Set in an apocalyptic underworld and populated by legions of sadomasochistic creatures, *Maken X* seems intent on snatching the honours for 'nastiest game' from *Silent Hill* and *Shadowman*.

The driving forces behind the game, producer Cozy Okada and character designer Kazuma Kaneko (*Megami Tensei*, *Soul Hackers*), have long been at the cutting edge of Japanese RPGs. *Maken X*, a firstperson adventure with action elements, is their attempt to go one step further.

The essential character of the game is a spirit, Blaine Jack, who inhabits a sword: Maken (meaning 'vicious sword' in Japanese). To move around, you 'brain jack' more than ten different types of creatures, gaining control of their bodies and fighting attributes. Juggling these skills enables you to progress through the 20 or so levels, with the amount of time spent riding shotgun and character also shaping the direction of the gameplay and the ending.

Sword-based combat is dealt with using Atlus' 'auto-focus' system. Similar to *Zelda*'s Z-lock, this forces opponents to face each other during battle. Refinements allow for switching between two enemies, as well as locking onto specific body parts for directed attacks. The game's impact will have nothing to do with technical niceties, however. It will be down to its grinding atmosphere, mixing techno-samurai styles with sadomasochistic and fascist schlock.

Although at present Atlus is understandably playing its cards close to its chest, it seems unlikely that all the characters currently on view will pass the censor uncut, particularly if the game is released outside Japan. **Edge** will be watching...





It is time for gamers to prepare to die in yet another grim but beautifully rendered 3D apocalyptic underworld

GT WORLD TOUR

The success of *Top Gear Rally* proved that Boss Game Studios' driving credentials were sound. Taking tips from the PlayStation's finest, it returns to road racing with a vengeance

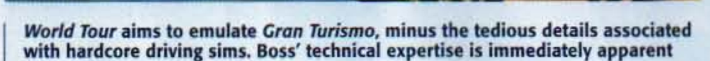












***World Tour* aims to emulate *Gran Turismo*, minus the tedious details associated with hardcore driving sims. Boss' technical expertise is immediately apparent**





The enhanced engine enables more than 15 vehicles onscreen with little drop in framerate

Format: **Nintendo 64**

Publisher: **Midway**

Developer: **Boss Game Studios**

Release: **March (US)**

Origin: **US**

"We don't want to be as extreme as *Gran Turismo*," says **Rob Povey**, Boss Game Studios' technical director, about its upcoming N64 racer. Povey wants *GT World Tour* to be immediately playable, yet at the same time offer the depth of *Gran Turismo*. "We're aiming for something much more arcade-like," he continues, "but still retains the realistic feel of Sony's game."

Boss has proven that it has the technical ability to pull this off – specifically with the release of *Top Gear Rally*. This visually impressive racer featured clean textures, smoothly drawn 3D tracks, and a tight control scheme that surpassed all other N64 driving games.

But *GT World Tour* is not a sequel. "It's a completely different game," explains Povey. "The idea is that it's easy to get into so you don't spend the first two hours crashing."

Unlike *Top Gear*'s off-road, mud-covered tracks, *GT World Tour* features smooth, paved surfaces perfect for strategic power slides. To support this new gameplay dynamic, Boss has written an entirely new game engine with tighter code and a more realistic physics model. The early version **Edge** saw hummed along at a solid framerate with more than 15 vehicles racing onscreen simultaneously.

The game features 32 unlicensed vehicles ranging from Porsches to Mustang lookalikes, each of which sports unique strengths and weaknesses. Ten tracks are based all over the world, while 180 course variations such as mirrored and reversed are available. The multiplayer options include a twoplayer, splitscreen cooperative mode in which players drive on a team and rack up experience points to garner more powerful vehicles.



The polished texture designs of *Top Gear Rally* returns for *World Tour*. The detail and realism on show take the N64 to the next level

Boss plans to include a letterbox hi-res mode for *World Tour* and one bonus track that runs in full 640x480. Surprisingly, the developer will not make use of Nintendo's 4Mb Expansion Pak.

"I'm concerned that the 4Mb Pak will end up becoming a selling point," Povey says, "which means we have to come up with some way of using it even if it makes no sense."

Given Boss' technical expertise and appetite for driving games, it's likely to be the closest thing to *Gran Turismo* N64 owners will see. And at the very least, says Povey, "It's going to be better than *GT64*."

AeroDancing

From the collision of Japanese gameplay and the realism of flight sims comes a new way to fly, enter CRI's airborne acrobatic challenge

Originality has never been popular in the staid world of flight simulation. Maybe that's because, with the exception of Nintendo's *PilotWings*, developers have been reluctant to believe that console games without plenty of seat-of-the-pants-style dogfighting were worth making. The processing power and graphical proficiency of Dreamcast could change all that. With *Aero Dancing*, Japanese developer CRI is attempting to strike a balance between the aerodynamic realism of aircraft flight and the gameplay possibilities offered by the console.

With the game close to completion, **Edge** met with CRI director **Tomonori Haba** and producer **Keisuke Chiwata** to talk about flying for fun.

Edge: *Aero Dancing*'s aircraft dynamics appear very realistic. How did you deal with the physics of the game?

Keisuke Chiwata: We built a specific engine for *Aero Dancing*. The team who built it did lots of research with the Japanese air force. They attended numerous Blue Impulse [the Japanese equivalent of the Red Arrows] team shows and visited their home base in Matsushima. We also had access to their flight simulator. The team started designing the standard T-4 aircraft, then had to create other planes with

Format: **Dreamcast**

Publisher: **Sega**

Developer: **CRI**

Release: **March (Japan)**

Origin: **Japan**









While much research has gone into refining the physics of *Aero Dancing*, the visual aspects of the game have not been ignored either







One of the game's most impressive features is the number of realtime viewing options available

different physics. The team was advised throughout by air force pilots. They explained how an F-15 or an F-4 should fly and their peculiarities.

Edge: Technically, what was the most difficult aspect of *Aero Dancing*?

KC: At the beginning we didn't have all the development tools. We knew the final specifications of the hardware but we weren't confident about the development. It didn't run properly at the beginning. It was running on a PC emulator, we couldn't display the graphics and it was very slow. We also wanted to make a flight simulator, something that hadn't been made before for a console. So we showed the game to a pilot who checked every detail. He recently came to take another look at the game and told us it had really improved.

In a league of its own

Edge: How does the game compare to air warfare titles like Konami's *Flight Shooting* and Namco's *Ace Combat 3*?

KC: *Aero Dancing* is a full simulation game. In flight shooting games the aircraft isn't flying, only destroying targets. For that reason the plane's movements have been modified. There are no targets, your objective is to fly as well as possible. It really is a new genre. There are some similarities with PC flight sims, but that genre is dedicated to maniac players and the flying is very complex. We kept the simulation concept and found a way to make it playable by any level of player.

Edge: How do you think console owners will react to games like this, which are normally more suited to PCs?

KC: Such a genre is rare for consoles, but last year sims such as *Densha de Go!* were released in Japan. We are gradually seeing more simulation games appear. But for consoles, simple commands are required otherwise nobody will play them. The results also have to be realistic to attract players. Until now it was difficult to make such realistic games for consoles, but Dreamcast suits this type of game.

Edge: How simple is it to fly with the controllers?

KC: It *is* a little bit difficult! [Laughs]

Edge: Does the title have a competitor?

KC: Maybe Konami's *Flight Shooting* game [see p26]. We saw it in magazines and the graphics are pretty good, but *Aero Dancing* is in a different league.

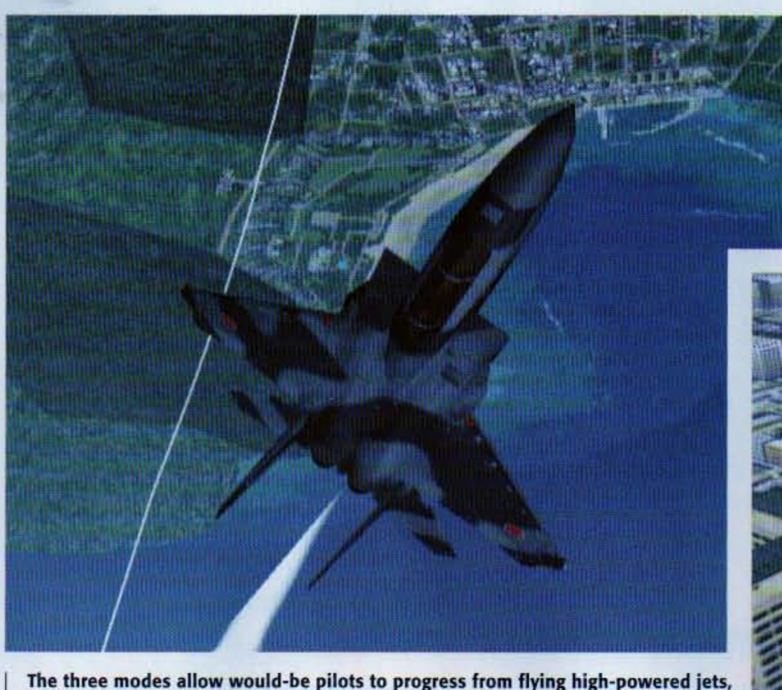
Tomonori Haba: You use the analogue stick and buttons. No keyboard is required. Players use the D-pad for flaps, air brakes and landing gear, and the four buttons for

"The team had to create planes with different physics. The team was advised throughout by air force pilots" Keisuke Chiwata, producer





Pilots can chose from up to 11 standard aircraft with additional models unlocked as bonus items







The three modes allow would-be pilots to progress from flying high-powered jets, such as the F-15J, to become commander of the acrobatic Blue Impulse team

the camera view, smoke, throttle up and throttle down. Trigger buttons are used for the left and right elevators.

KC: Compared to a regular flight shooting game, the commands are a little bit more complex. But we included a special training mode where players will learn how to use all the commands step by step.

Edge: How is the VMS used?

KC: We only use the VMS for saving data and keeping some configurations. We didn't include any mini-games.

Edge: What kind of relationship do you have with Sega?

KC: CRI has a complex relationship with Sega. [CRI is owned by CSK but has Sega members sitting on its board of directors.] We developed some tools for the Saturn and the Dreamcast. For instance, we released some music ADX software and MPEG software that titles like *Sonic* and *Virtua Fighter 3tb* are using. However, for *Aero Dancing* we have a simple thirdparty relationship with Sega.

"Basically, you play alone, but it is possible to fly together in the fourplayer mode. The main objective there will be to fly in formation and not to be separated from the group" Keisuke Chiwata

Formation flying

Edge: What about multiple players?

KC: Basically, you play alone, but it is possible to fly together in the fourplayer mode. The main objective there will be to fly in formation and not to be separated from the group. It's not a competition but a fourplayer cooperation.

Edge: How many planes are included?

KC: Players can select 11 planes plus some hidden ones. In the Blue Impulse mode it's only possible to use the T-4. Some of the required moves can't be made by the other types of planes. But if you clear the whole stage some extra features will become available.

Edge: How does progress work in the Blue Impulse mode?

KC: You start by learning simple commands. By mastering the moves, players will go to the next stage. Approximately 20 stages are offered in the Blue Impulse mode. The first ten stages are dedicated to training. From the 11th stage, players will enter the Blue Impulse team and have to perform acrobatics, in formation and alone. The CPU will appraise the performances and give comments throughout the game.

TH: In the learning phase, players will fly a simple training T-4. After entering the Blue Impulse formation, players will pilot a T-4 in the colours of the team. Its performance will be slightly improved. The smoke, for example, will become available.

With CRI currently concentrating on refining the multiplayer formation-flying mode, the prospects for this novel game are good. The graphical detail and realistic physics will satisfy budding Blue Impulse wannabes in Japan. **Edge** suspects, however, that the wider Dreamcast community will be a tougher test of *Aero Dancing*'s mettle.





Smoke effects add to the feel of formation flying







Like this F-16, all the jets on offer are decked out in the colours of the Japanese national defence force

QuakeIII:

After creating the definitive multiplayer deathmatch game, id is back with a third iteration. **Edge** corners Carmack's team of designers to find out once and for all whether the 'singleplayer game' is fact or fiction



Format: **PC/Macintosh**

Publisher: **Activision**

Developer: **id Software**

Release: **TBA**

Origin: **US**



Although much larger in scale, the environments stay true to the *Quake* style, with intimidating architecture towering above. Level designer Tim Willits has called for visually pleasing maps that don't obstruct the player

There's an industry of PC developers hard at work on what they hope will be *Quake* killers. But no one, as yet, has pulled it off because no one works harder, or smarter than John Carmack and his team. Whenever someone thinks they're close to toppling id, the boys in Texas launch another groundbreaking game and kick the competition all the way back to their drawing boards. As the third iteration of *Quake* appears on the horizon, the burning question is, what exactly *is* the singleplayer game?

At its core, the singleplayer game will be a series of deathmatches spread out over numerous levels against CPU-spawned opponents. This might not be as inspiring as *Half-Life*, but this is a different kind of game. As sure as *Quake II* remains the consummate multiplayer deathmatch title, id is determined to take that non-stop-action experience and bring it to the singleplayer who has never experienced the thrill of the multiplayer deathmatch.

"The ultimate objective in *Quake III: Arena*," says level designer **Tim Willits**, "is to reach the ranking of one, to be the grand champion."

Ladder system

Almost like starting a racing game, players will start with a selection of several easy maps, each with single-story architecture that won't require jumping or repellent lava pits. And like a fighting game, the first-level bots will be fairly easy to destroy.

"You start out at the lowest ranking," Willits says, "and there's only a couple of levels that you can play. Once you achieve a high enough rank, you'll move on to the next set of levels."

"You start at the lowest ranking... and there's only a couple of levels you can play. Once you achieve a high enough rank, you'll move on to the next set of levels" Tim Willits, level designer



***Quake III*'s fantasy-styled realms rarely fail to impress, although the characters' colour schemes are hardly the most subtle around**







According to the team of designers, *Quake III: Arena* will be an even faster, arcade-style experience, which should satisfy hardcore gamers

Everyone at id agrees that the success of the singleplayer game lies mainly with the team's ability to make the bots play as naturally as possible at different skill levels

Willits admits these first levels are being designed to ease novice players into an accessible deathmatch scenario. But fans needn't worry, *Quake III* will boast an enormous amount of replay value and customisation options. And there are a few new additions, not least of which are three different classes of character to choose from.

"We have the light guy, the medium guy, and the heavy guy," says Willits. "The light guy runs faster, but can't take as much damage. And the heavy guy can take more damage, but runs slower. You can take a real good shot to the head and still survive and keep on playing!"

Even at this early stage, the designers feel this brings a whole new dynamic to the game, and they admit to already having favourite character classes.

"We're hoping that people won't just migrate to one," Willits says. "We're hoping that we will set up enough differences, advantages and disadvantages to make it cool."

Enter the arena

And, of course, with only multiplayer maps as the focus, the level designers have had to change their philosophy.

"We want to give an arena-type feel," Willits explains, "not an arena like a gladiator arena, where the maps are just simple little holes, but something where there's unique architecture, interesting areas that are specifically designed to play the best deathmatches."

Alongside designers Brandon James and Paul Jaquays, Willits has been building larger levels with more easily identifiable areas.

"You'll be talking to your friend, for example," Willits says, "and you can say, 'Hey, let's play that map with the laser grid that protects the power up,' instead of just 'Let's play map 26.'"

Environments will also change throughout the course of the game. Willits mentions seven styles of levels that span from futuristic, techy settings to a giant construct that appears to be the innards of a demon. Already *Quake*'s familiar industrial, carved stone and castle environments (replete with lava pools) have been expanded.



The maximum number of bots in a singleplayer level hasn't been specified at this early stage, but id's AI programmer, John Cash, claims that he has already playtested a level with 15 running around simultaneously



Although the overall game will comfortably fit in to the established style of the *Quake* universe, some of the graphical elements appear unusually organic. Curved surfaces are now a key design consideration

"It's not our goal to reproduce the mundane world," Willits says, in response to **Edge**'s probing about real-world environments, pointing to a variety of impressive design work.

"You don't see this in other firstperson shooters, because they can't do this stuff," he continues, "nobody's come close. So I don't think you're going to be bitching about it being too brown."

And while complex scripted experiences tend to be growing in other firstperson, singleplayer games, they won't be found here.

"We can't have one-offs," says **Brandon James**, "because these maps have to have a continuous loop to them."

Nor will any of the bots' actions ever be scripted. However, that doesn't mean the bots won't have personalities. "We definitely want a handful of really distinct, unique guys," says James, "and we're going to have a bunch of guys that are like the Red Shirts in 'Star Trek', for people to get in there and kill."

Everyone at id agrees that the success of the singleplayer game lies mainly with the team's ability to make the bots play as naturally as possible at different skill levels, and that responsibility lies with AI programmer **John Cash**.

"It's really easy to make a bot to just kick your ass," says Cash. Making them play like poor, but believable, players has been his biggest challenge (see p60), and the demo **Edge** played suggests he has risen to it admirably. On an early map, Cash spawns two bots. The first is a real rookie, a "keyboard player," as Cash calls him, designed for the first level, while the other is a bit more experienced, although not overtly skilled. In a deathmatch with **Edge**, the difference was immediately noticeable.

Cash humbly admits that it comes from a lot of tweaking. "The first time we put them on a level," he says, "the guys were fighting with them, and they started laughing. I said, 'What's so funny?' They said, 'Every time we're fighting, they'll strafe right over into the lava.' Normally they wouldn't go in there, but during the heat of combat I had them so focused on the fight, they weren't checking things like where they were going. Nobody plays badly enough to blindly run into lava pits. But it'd be reasonable for a beta bot to accidentally stumble in once in a while."

Scaling the skill of the bots is one thing, but giving them personality is quite another. Cash spends time online watching multiplayer games, and explains that there are a few simple things most people do that they replicate straight off. Some bots will have a preferred weapon, some will be tuned to be very aggressive, some will hang back, or will maybe be very health conscious.

Other observations aren't as tangible. For example, like a human player, the bots will eventually zero in on a player if he doesn't move for a while. And like many online *Quake* players, there will be bots who know the levels exceptionally well and still can't aim, versus those who may be a good shot but who have no idea where the weapons are.

Skeletal animation

Be it single or multiplayer, *Quake III* will feature some animation improvements. Most impressive is a new segmented skeletal animation system. If two players are standing in the room facing each other, and one looks at the ceiling, the



It may not look as 'real' as Valve's *Half-Life*, but that is exactly id's intention. The designers apparently wish to avoid the 'mundane'





This scene (left) capably illustrates John Carmack's impressive new rendering techniques. Character models, meanwhile, will be more comprehensively animated than those of *Quake II* and its ilk

"You know, a lot of people think that I just know everything at all times. And the truth is, I had never done any curve rendering before the start of this year" John Carmack





Thanks, in part, to Apple's new gaming drive, *Quake III* will appear on Mac and PC simultaneously, and the two versions should be just about identical

other player will see his head crane skyward in a very lifelike way. Also, there's knock-back animation for players who get sent flying from a serious hit.

But what about *GoldenEye*-style hit-specific animations, and location-based damage? Id's designers feel that these slow down the game or aren't noticeable enough to be worth it.

"When things aren't in the game," Willits explains, "there's a reason they haven't been included. It's not that we couldn't do them. I mean, we have John [Carmack]. The end product is what's important, and the experience that you're having."

So what is the almighty id co-founder and lead programmer **John Carmack** contributing to *Quake III*? The most noticeable graphic effect from the master programmer is the new curved surface technique, implemented with a Bezier mesh render he wrote last year.

"I went through a learning process," says Carmack. "You know, again, a lot of people think that I just know everything at all times. And the truth is, I had never done any curve rendering before the start of 1998."

Obviously his research (which included poring through Siggraph materials and writing plenty of experimental renderers) paid off, as the curved surfaces that appear in *Quake III: Arena* are unrivalled.

Id is hesitant to reveal too much about the game before it's finished (and doesn't have a completion date either). So when quizzed about the weapons, the list was very tentative, although the team did confirm that the Shotgun, Plasma Gun, Rail Gun, Machine Gun, Carbine, and the BFG will feature. A Lightning Gun is also in development, but the team wasn't sure whether it was going to 'chain' or not. A 'Bouncy Gun' with reflecting shots was working, but not everyone was impressed, so it may not make the final cut. And a mid-range, melee weapon? A flame thrower is in the pipeline. Other possibilities include a short-term flight power-up as well as a grappling hook that may be capable of grabbing other players.

With *Quake III: Arena* being designed to introduce casual players to the multiplayer experience, will it be enough to satisfy the hardcore market already well-versed in the art of the deathmatch? Chances are, you're not asking. Singleplayer, multiplayer – you've been with id long enough to know that it won't let you down.



Weapons can be switched much more quickly than in previous *Quakes*. Plus, each will actually fire from the centre of the screen rather than from the side

Gran

Format: **PlayStation**

Publisher: **SCEI**

Developer: **Polyphony Digital Inc**

Release: **TBA**

Origin: **Japan**

Turismo2

Travelling 9,000 miles to see a driving game may seem excessive, but this is no ordinary driving game. Edge meets the man responsible for one of the greatest driving games of all time and chats exclusively about the sequel that until now no one believed existed...

Step off the plane, jump into a taxi and the overwhelming realisation that you've arrived on Japanese soil hits home as soon as you join the connecting motorway. *En route* to Tokyo you're surrounded by a heaving mass of vehicles (an impressive number of them new), many of which sport racy bodykits, engine tune ups and go-faster livery. Even delivery micro vans aren't spared, boasting spoilers in places where air is unlikely to ever flow. Generally speaking, the Japanese love cars, which, considering how long they spend in them at rush hour, is rather convenient.

No such problems this morning, though, and with the city's sprawling suburbs now far behind in the distance, **Edge** arrives at Polyphony Digital Inc's offices right in the heart of the capital, and conveniently just around the corner from SCEI's headquarters. A BAFTA for the Computer Programming Award may now sit inside F1 driver Olivier Panis' racing helmet (a present from Sony France after Polyphony executive vice president and *Gran Turismo* producer, **Kazunori Yamauchi** attended last year's Le Mans race) in the company's meeting room, but until December 23, 1997, the list of people



Photography: **Hiroki Izumi**

ready to dismiss Yamauchi's team as another internal SCEI development outfit must have been as long as the drive back to the airport.

Yet, after *Gran Turismo*'s phenomenal domestic success (a feat repeated five months later all over Europe), few could remain unimpressed with Polyphony's perfectionist attitude, technical aptitude, and an indubitable passion for racing games. After five long development years, Yamauchi had realised his dream. All of a sudden, Japan had its very own Geoff Crammond.

Perhaps fittingly, then, one of Crammond's finest efforts is Yamauchi's favourite racing title of all time. "*Grand Prix* from Microprose on the Amiga," he says enthusiastically. "I must have played that game constantly."

Yamauchi-san is an avid motorsports follower, "I went to the Monte Carlo Rally, which Carlos Sainz won, and in some of the sports magazines, if you look carefully at the shots of the final celebratory champagne spraying you'll see me with a camera in my hand attempting to get my own picture of him. And I didn't know it at the time but right behind me was Sainz's wife, so I got closer to him than her," he laughs. "I also drove a Peugeot through the Sisteron stage – it was really frightening," he concedes, before reflecting on the possible positive implications of a perilous mountain road system: "The environment to bring up good racing drivers exists in Europe, whereas Japan is really poor in terms of interesting roads and tracks."

But surely Japan has a huge culture of motorsport lovers? "Yes, but no good roads," he says. "In Japan, when there are good stretches they tend to last only ten or 20Km, but in Monaco, for example, if you take the country road from Nice you have this winding road which continues forever. Everyone drives so fast, though – I thought I was on the limit, but I got overtaken so many times."



As well as increasing the car selection to around the 400 mark, *GT2* also offers a wider range of tracks. These are a mixture of 'A-to-B' stages and circuit-based offerings to suit the game's many different race categories

Teamwork

Still, after the chitchat, it's time to get round to the main reason for **Edge**'s visit: *Gran Turismo 2*. Second time around, the original team members remain, but they're joined by 30 part-time graphic designers, dramatically increasing the overall number. And, as just about every aspect of the original has been enhanced for this sequel, this is out of necessity rather than luxury.

"*Gran Turismo* uses approximately 75 per cent of the PlayStation's maximum performance so that means there's 25 per cent extra to be used," explains Yamauchi. "And what I'm trying to achieve in *GT2* is to use the remaining 25 per cent to bring out all of the aspects of the original at a higher quality."

And this is where the improvements come in, perhaps the most striking of which (as you've probably already figured out) is that *Gran Turismo 2* features several categories of motorsports, namely production, GT, rally and sportscar racing. Another impressive and exciting revelation is the 400-odd vehicles that are currently due to make the final code. "We're aiming to get the cars to look even more realistic," he reveals. "So the visual quality is going to be enhanced, but it's unlikely to have the same impact as *Gran Turismo* had, as that was so different from all the other racing games of that time. But we're aiming to use the graphics in a way that if car enthusiasts or car lovers look at the game they will be very happy – the level of detail should please them."

No doubt it will, but then so will the selection. Although unable to divulge any of the many vehicles **Edge** was shown, as

Second time around, the original team members remain, but they're joined by 30 part-time graphic designers. And, as just about every aspect of the original has been enhanced for this sequel, this is out of necessity rather than luxury



A keen motorsports fan, every weekend *GT* producer Kazunori Yamauchi (right) races round his local race track attempting to improve lap times in his Mitsubishi Lancer





All of the vehicles have been updated to include current production models

potential final models have licensing negotiations pending with their respective manufacturers, the line-up is currently wildly more comprehensive than in its predecessor.

But not only does *GT2* offer a far more international automotive menu, the cars have been picked by individuals with an ample knowledge of the subject. Sure, you can expect plenty of obvious motoring entries, but even the briefest of scrolls through the vehicles on offer reveals some real surprises, including special and limited editions to delight even the most dedicated motoring aficionado.

The track selection is nothing short of spectacular, too. Most are still in the process of being designed, but expect twice the number of the original, as well as a mixture of circuits and point-to-point stages favoured by rally events. Like the cars, they too now boast a more multinational flavour, so don't be surprised, for example, to find yourself rallying in Tahiti, negotiating 90-degree turns in a Seattle street circuit, speeding through Rome's ancient – and narrow – streets, and of course, slinging the car around every bend the Côte D'Azure can throw your way.

Naturally, these will also benefit from a polygonal make-over. "You've probably noticed that something like *Ridge Racer Type 4*'s environments are as attractive as the cars themselves, so I would also like to improve the tracks' aesthetics," offers Yamauchi-san. "However, *GT2* uses almost half of the PlayStation's ability in physics modelling, so all of the game's other aspects must be used with the remaining 50 per cent." Surely, then, Gouraud shading is out of the question? "We'd used Gouraud shading in *Motor Toon GP*, prior to *GT*, so technically we're able to do it, but as half of the CPU power is used for the physics, using Gouraud shading for the entire game would exceed the cache memory capacity," he explains. "If the information exceeds the memory capacity, the performance of the CPU drops dramatically, which is why we didn't use it in the first game. But for *GT2* we are trying to implement some Gouraud shading – we'll think of the most effective use for it."

Super model

Of course, the ameliorations extend beyond a higher number of cars, circuits and flashy graphics. "The third major improvement in *GT2* would be the car physics model," Yamauchi adds. "The model in *GT* was very close to real-life cars but was still lacking some of the mechanics actual cars have, so in *GT2* I'd like to make it as complete as possible – the model would behave more authentically and that would mean the cars would drive as real cars drive." This, obviously, is an ambitious move, but given the astounding dynamics in the original game, perhaps not unrealistic.

Edge was shown the setup options used by the team to input the characteristics for the car models featured in the game, and they offer perhaps the most bewilderingly comprehensive selections ever witnessed. Every aspect of a motor car can be altered, from the usual torque, gear ratios, brake balance and suspension stiffness to steering angle, axle width, alloy size and tyre tread.

"The physics model in *GT* was very close to real-life cars but was lacking some of the mechanics actual cars have, so in *GT2* I'd like to make it as complete as possible – and that would mean the cars would drive as real cars drive"

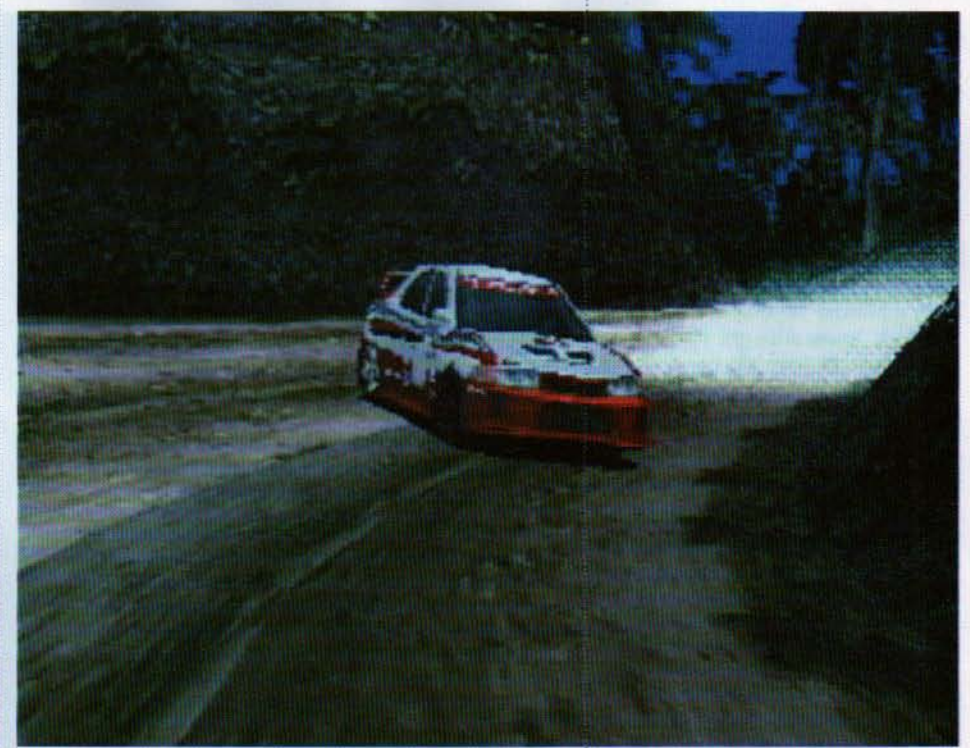


In this second outing, the car selection promises a far larger European presence

Better by design

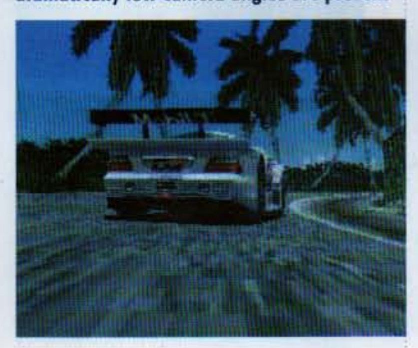
For a car enthusiast, the temptation to experiment with these parameters must be enormous, and given the appearance of a certain 'tweaked' 4WD Mitsubishi FTO in the original game, it's not something Yamauchi is necessarily capable of resisting. "That's right, there is a 4WD FTO in *GT* but I made it for two reasons," he confesses. "While developing *GT* I heard a rumour that





A quick visit to *GT2*'s intricately detailed development setup options to increase the vehicle's oversteer characteristics, boost the torque levels, and Yamauchi-san is off on another lap of the Tahitian rally course

The replay mode wasn't finalised when Edge was shown the current work-in-progress version of *GT2*, but already some of *GT*'s dramatically low camera angles are present





Mitsubishi was trying to make a 4WD FTO but gave up the idea because making a 4WD turbocharged sportscar would end up too expensive. The second reason was as an experiment in making the ideal sportscar in the game. So we didn't just add four-wheel-drive – we also changed the height of the engine," he explains. "We modified the car in order to make what in our opinion was the ideal sportscar." However, despite the incredibly driver-friendly result, Yamauchi is keen to emphasise that no programming tricks were used to achieve this. Rather, it was a case of tweaking the suspension, moving the petrol tank and engine to the ideal position and having the ideal wheelbase and tread, with surprising consequences. "As a result of finding ideal positions for these things, I found that many real cars are totally unbalanced," he announces confidently. "Among all the cars, the closest to perfection is the Ferrari 355. Compared with the Honda NSX, the suspension is soft but doesn't exhibit as much body roll, and it's very comfortable to drive, as well as driving fast on circuits."

Having personally driven most of the cars in *GT*, a task you would expect him to have repeated for the sequel, Yamauchi-san is in a position to make the above reflection with a certain amount of authority. So you listen when he explains why he likes compact, fast cars and why the Lotus Elise and the forthcoming Honda S2000 (for which he has already placed an order) are two of his favourite cars. He may have crashed his Subaru Impreza while developing *GT*, but his current vehicle, a Mitsubishi Lancer Evolution 5 (similar to rally world champion Tommi Mäkinen's car), has suffered no such fate this time, although it will soon be undergoing something perhaps more dramatic. "While browsing the Mitsubishi homepage on the Net I came across an auction where the set of decals used as Mäkinen's car livery for the Australian rally were for sale. I put in a bid and ended up buying it, so within a couple of weeks I should have this real Lancer Evolution kitted out like Tommi Mäkinen's rally car."

Steering him quickly back to the game in question he adds, "Sound is one of the things that I'm not satisfied with in *GT*. For instance, we tried to make the graphics and other aspects as sophisticated as possible, but we didn't have enough time to work on sophisticated sound. *GT2*'s will be better. Actual cars sound better, which is why I'm not satisfied – whether from inside or outside the car, it sounds a lot better."

And if you think Yamauchi is a bit harsh on *GT*'s sonic ability, you may be surprised to learn what he has to say about the game's CPU drivers. "The AI is probably one of the lowest achievements in *GT* so in the sequel it will be much improved. For instance, the opponent cars would drive as if actual human beings were driving them," he reveals. But, of course, everything in life is relative; "When I say that it was probably the lowest aspect, it's in comparison with the game's other aspects

"We made the decision not to increase the number of cars... I would choose to increase the number, but the hardware limitations mean a realistic increase would add another two cars, which would not make a significant difference"





Although still in early development at this time, the level of detail on the game's many vehicles has improved to surpass the already impressive visuals found in *GT2*'s predecessor, pushing the PlayStation to its limits



– compared with other racing games this low achievement is probably still superior. In normal racing games, a car comes up to you, overtakes you and races into the distance. And then another one comes and does the same thing – or you do it to them – and you'll probably never see more than a couple of cars at the same time onscreen. With *GT*, the group of six cars are always racing with each other, which is very difficult to achieve."

Quality control

Some things, however, have remained the same. "We made the decision not to increase the number of cars on the track because there are so many other things that we have to increase as far as the quality is concerned," acknowledges Yamauchi-san. "Of course, there was the option of retaining the quality of the tracks in the original game in order to increase the number of cars racing, but we chose not to take that option – we preferred to raise the quality in all areas. If you increase the number of cars you are racing against from six to 25, say, then the racing will be different – the game will be different, in fact. If that could be realised, I would choose to increase the number of cars but the hardware limitations mean that a realistic increase would add another two cars which would not make a significant difference."

Predictably, and like *RR4*, *GT2* will support Sony's PocketStation for players wishing to grow their vehicles when separated form their 32bit machine. Less expectedly, but still like Namco's latest racer, Jog Con compatibility will be possible, in addition to normal Dual Shock use. "When I first heard Namco was making this force-feedback controller, I thought it would be perfect for *GT2* because it would make players feel as though they were driving the vehicles," explains Yamauchi-san. "But when I tried it, it proved less precise than I had originally expected. If Namco had made it in the right way it would have been a perfect control method, so I was a little disappointed."



One of the most significant additions for this sequel is the incorporation of several differing categories of motorsports. Expect rallying and sportscar racing as well as the previous production and GT car action

Missing link

Sadly, link-up compatibility looks unlikely, but Yamauchi-san is not unaware of its potential. "It would be really fun to have two or more people playing together – it's something I did in *Motor Toon GP 2*, but the link cable is not particularly popular in Japan, so even if we supported it not many people could enjoy it." But the predicament is more than just commercial viability. "It's something I would love to try but one of the problems is that the hardware specification and the cable's specification are not perfectly compatible, so using it drops the CPU power by 20 per cent. With games like *GT2*, which pushes the CPU to its limits, it would prove a hindrance."

But despite this slight blot on what is otherwise shaping up to be a thoroughly unmissable videogame driving experience, Yamauchi-san rekindles **Edge**'s spirit with a last mission statement. "I would like to see more people play the game – in fact, as many people as possible, while still maintaining the fun aspect of the original so the aim is to provide a game that everyone can enjoy, albeit at a higher level," he states. "*Gran Turismo* was released in December 1997. I'm told that there are still people playing it now, but let's say that an average player may have taken two months to complete the original game. For *GT2* we're expecting the average user to spend a year playing it."

Having met Yamauchi and seen the current state of *Gran Turismo 2*, you get the feeling that this is not simple corporate exaggeration.

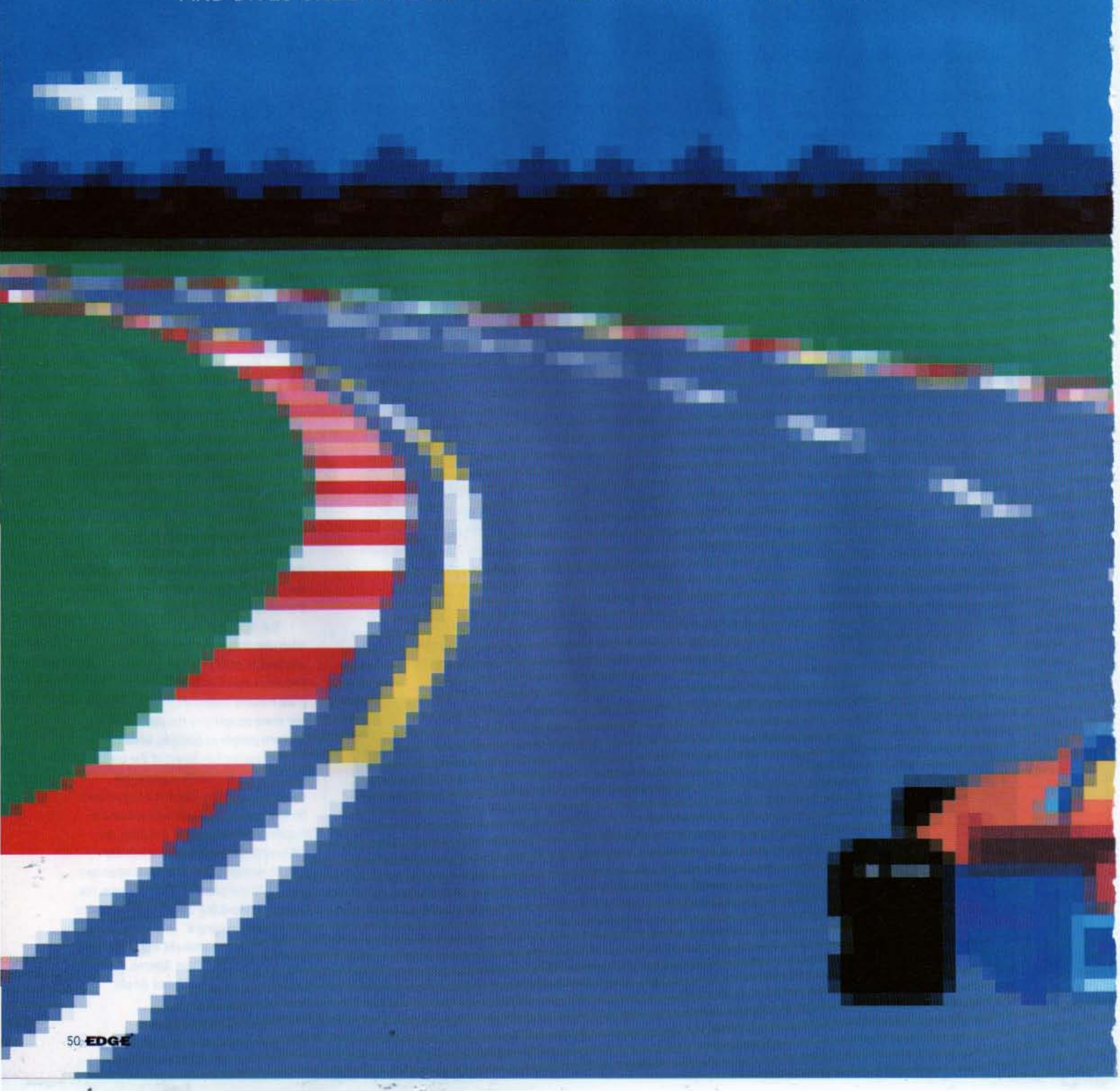


Yamauchi and his team are working hard to ensure that the dynamics in *GT2* are even more advanced than the previously lauded physics model found in the original game



LEARNING CURVES

HAVING BEEN STUCK IN NEUTRAL FOR MANY YEARS WHILE OTHERS AROUND IT OVERTOOK, THE RACING GENRE HAS FINALLY FOUND FIRST GEAR AND UNDERGONE A MAJOR SHIFT. **EDGE** DONS ITS OVERALLS AND DIVES UNDER THE BONNET OF TODAY'S RACING VIDEOGAMES





In 1993, while doing a spot of promotional work for sponsors Sega as part of his contractual obligations for the Williams Formula One team, then-triple world champion Alain Prost (who would go on to win a fourth championship that same year) visited London's SegaWorld and found it hard to resist a go on *Virtua Racing*. He crashed. Spectacularly so, in fact.

And while it was all smiles for the local camera crews, his mind must have been working overtime in an attempt to figure out what had gone wrong. After all, he had applied everything he had learned since driving his father's tractor at the age of four. He'd stamped on the left pedal and applied the throttle at all the right points, just as he had through his karting, Formula Renault and F3000 days. Every ounce of his considerable experience had been transferred through the cabinet's advanced force-feedback control system and he'd still careered off the black stuff with remarkable brutality.

In reality, it wasn't his fault. Perhaps naturally, he had simply assumed his virtual single seater would behave like the carbon-fibre variety he drove at work. When it didn't, there was little even he could do, and the result must have surprised him as much as those standing around watching.

But anyone who walked away thinking that *Virtua Racing* was hard because it was realistic couldn't have got their steering rods more crossed. Like the world's first 3D arcade racer, Namco's 1989 *Winning Run*, or the highly popular sprite-based *Monaco Grand Prix* before it, Sega's first polygonal racer was difficult because its developer had played around with Newton's principles and come up with a highly suspect set of dynamics.

Power to the pedal

The truth is, until not too long ago racing games had little use for a brake button. In fact, the majority of titles featuring fast vehicles could be played by wildly swinging the steering wheel or yanking the joystick without having to think about the application of the middle pedal. Whoever considered braking in *Final Lap*, *Chase HQ*, or even *OutRun*? Not so these days. Whereas cars could once be thrown into corners at unrealistic velocity, without fear of understeer setting in, the current incorporation of authentic dynamics into games requires an equally realistic approach.

And, as any racing driver worth his Sparco overalls will tell you, braking is the essence of a fast lap. Any fool can floor the accelerator in a straight line but picking the optimal breaking point and deceleration intensity before a bend, approaching at two to three times the national speed limit, is a little trickier. Brake too much, too early, and you'll fail to carry enough speed into the corner resulting in lost time; while coming in too fast causes you to waste precious seconds correcting the car on the exit of the bend. That's assuming you've managed to pass the apex without ending up tail-first into the nearest gravel trap, of course.

Now an F1 team manager with two paid drivers implementing all of the above rather than having to worry about it himself, if the *Virtua Racing* experience has haunted Prost over the last six years, he would find a trip down to his local arcade particularly exorcising, because, along with the graphics, physics in coin-ops have since moved up a gear. *Ridge Racer* et al still exist, but their like faces inevitable extinction. The arrival of *Daytona* on the arcade scene marked the beginning of an ever more dynamically complex grid of motor racing coin-ops. Where once *OutRun* had stood as the ultimate driving experience, the tyre screeching now came from the *Sega Rallys* and *Racing Jams* of the arcade racing world.

"Putting in a more complex physics model doesn't mean it will be more difficult" Kazunori Yamauchi, Digital Polyphony Inc



Atari's *Night Driver*, from 1976: the very first '3D' racing game in history

DYNAMICS

TAKING THE DRIVING EXPERIENCE INTO THE FUTURE



Colin McRae Rally


Gran Turismo

Authentic dynamics are the future of racing games. *TOCA*'s producer, **Gavin Raeburn**, believes the most important aspect to get right in a driving game is to convince you that you're part of the game, part of the experience. "Getting the physics of the car right is a very important first step," he says. And you know you've got it right when someone can apply their knowledge of driving to the polygonal vehicle onscreen and see it behave the way it would in real life. **Edge** witnessed this when a rally instructor, who had never previously played a videogame, got to grips with one of *Colin McRae Rally*'s Corsican stages and posted a very respectable time.

Grand Prix Legends is more difficult, but only because it's realistically recreating the task of driving a 1967 F1 car. That isn't to say the modern F1 car is a learner-friendly vehicle, but a quick go on *Grand Prix 2* should illustrate the advancements in stability, deceleration ability and the effect of downforce on cornering speeds that 30 years' development allows.

Part of the genius of *Gran Turismo* is that the standard production cars makes it accessible to most individuals. Its vehicles are not – initially – motorised beasts boasting 700bhp and requiring a racing licence. They're everyday models which you can steer around the track with little problems provided you keep to velocities that are within your driving ability. Just like in real life, in fact.


GP Legends


Grand Prix 2



Once upon a time, all driving games wanted to be like Sega's enduring and gloriously playable *OutRun* arcade

Ever closer, the consumer game soon heard about it and the console driving game followed in the coin-ops' slipstream. It's no coincidence that despite the existence of countless arcade-style racers, *Gran Turismo*, *TOCA* and *Colin McRae Rally* were last year's three best-selling PlayStation racing titles.

Fast learner

"I recently realised that making the cars in the game as close as possible to real cars doesn't necessarily mean that it will make controlling the game difficult," says **Kazunori Yamauchi**, producer of *Gran Turismo* and its equally impressive sequel (see p44). "So even if you reproduce the actual car within the game, the driving should become even easier – putting in a more complex physics model doesn't mean it will be difficult."

These days, after the immediacy of *Gran Turismo*, this may seem a perfectly logical statement, but as realism has traditionally been linked with difficulty, it's still a particularly revolutionary concept. "Of course, and I thought the same way too at the beginning, especially after playing lots of simulations on PC," agrees Yamauchi. "But while developing *GT* I gradually had the feeling that probably making it more elaborate would not necessarily make it a more difficult game, although I didn't know this for sure. But if you consider real-life driving – for instance, I take my car to the local circuit and I can drive – it isn't as difficult as many think. Of course, if you are driving a sportscar and adopt a highly advanced driving technique this would be very difficult, but if you drive normally, everybody can do it, so I thought, why can't this be reproduced in a game?"

According to Yamauchi, the problem with many racing simulations is that they fail to use real or precise physics models. "That's why it makes the game difficult," he offers. "If you're driving your own car in a straight line on a track and turn into the first corner you will make the corner, the car will not spin and crash into a wall. So that's how cars are made and that's how they should be reproduced in the game – it might be very difficult, but if you do have the correct physics model reproduced in the game then it should be achievable."

Most developers now recognise the importance of physics, although some believe a little cheating can enhance the gaming experience. "The user must feel at one with the car he's driving, and it must respond in a way he would expect the real car to, otherwise he'll blame the game for his driving mistakes and feel frustrated," says **Gavin Raeburn**, producer on both of Codemasters' highly successful *TOCA* games. "This doesn't actually mean the car physics need to be a carbon copy of real life, and, in fact, I believe exaggerating certain areas of the physics is necessary if you are to match the expectation of what the user remembers or believes the real driving experience is actually like."

Was this the case with two popular Touring Car recreations? "Yes. For *TOCA* and especially *TOCA 2*, we tweaked certain areas of the game to make it more involving," he reveals. "For example, although the cars are all front-wheel-drive in *TOCA 2*, we moved the weight balance of all the *TOCA* cars back about one to two feet. This simple change makes the cars handle ever-so-slightly more like mid-engined cars, and makes them a lot less frustrating and a lot less dull to drive."

Reality bites

For others, however, only complete realism will do. Take **Mike Lescault**, director of development at Papyrus and a long time developer of racing simulations for the PC.

REALISM

THE CRUCIAL, DELICATE BALANCE BETWEEN AUTHENTICITY AND GAME ASPECTS







Advances in processing power have undoubtedly allowed developers to release ever more authentic and complete recreations of motorsporting activity, but there is also an undeniable trend towards realism in all games, not just racing titles. The concept is simple – placing you within a real-world environment not only makes it easier to relate to the game, but it also allows you to react to that environment in a realistic way. So *GoldenEye* guards can be shot through glass, falling from excessive heights will kill Lara, and Solid Snake must refrain from making any sound or suffer the consequences.

You can have too much of a good thing, of course. "In *TOCA* we went for out-and-out realism, which is what we thought people wanted, but although the tracks were as accurately modelled as it was possible to get, we still got criticised for the tracks looking bland," says **Gavin Raeburn**, the title's producer. "Unfortunately, as the real tracks are built for the most part on deserted airfields they are just very bland. So, yes, the user may say they want realism, but what they really want is what they imagine or remember the realism to actually be like – the whole experience. You need to build a believable world that reflects the sport or style of racing you are trying to recreate." However, for some people, such as one of last year's new Touring Car series drivers who admitted learning the tracks by playing *TOCA* on his PlayStation, only absolute realism will ever do.

POPULARITY

UNDERSTANDING GAMERS' ENDURING PASSION FOR DRIVING TITLES

The popularity of racing games remains startlingly high despite fierce competition from other genres, yet the explanation is remarkably simple. Cars are everywhere – there are few individuals whose life doesn't involve driving or being driven in some form of motorised transport. As such, it's possibly the easiest of videogames to identify with – individuals who have never played a videogame can pick up a joypad and steer a car around a track with some degree of success within seconds. However, the chances of getting them to manipulate a plump plumber around *Mario 64*'s world with the same immediacy are comparatively thin.

And there is an undeniable global interest in cars travelling at high speeds – after the Olympics and the World Cup, F1 races are the most widely watched sport event on the planet. While recent F1 seasons have been robbed of their full potential by a governing body conceding to today's absurd social trend of obsessive sanitation, at its best, motor racing is easily one of the most thrilling forms of entertainment to grace today's cathode ray tubes. Well, as long as you're into cars, that is. And you probably are. Racing games continually top **Edge**'s reader surveys as the favourite genre, but ironically, it is one of the categories to undergo the least amount of change over the years. The premise of racing games remains the same as it always has – ie, remarkably simple – regardless of whether the racing occurs on an F1 circuit, a dusty rally stage, or the surface of some distant planet.


Pole Position


F-1 World GP

When he talks about the dynamics of the company's sublime *Grand Prix Legends* you soon realise that he's part of this group. In fact, given his enthusiasm for skid marks, he probably chairs the meetings. "Usually in racing games, if a car crashes you can see the tyre marks as two straight lines going into the distance," he begins. "With us, however, you can see how they twist and contort as the car spins, and if you hit a barrier and fly into the air the skid marks will stop as you see it flip through the air – and if you watch it in slow motion, as one side hits the ground you'll see a skid mark where the tyres hit, and afterwards you drive around the track and you just see this mess of skid marks. That really adds to the game."

He's right, of course – a good racing game is more than just a bunch of mathematical equations. It's an entire package, which includes the right quantity of all the necessary aspects. Knowing which and how much, however, is what differentiates *Colin McRae Rally* from *Tommi Mäkinen Rally*, for example. "The graphics are very important – how the game looks is important," offers Yamauchi-san. "But, when you're actually driving a car, especially when you're driving a sportscar, probably the most important thing is to communicate with your own car and the road you're driving on. Even though you're not holding a steering wheel, it's important to maintain such communication with the joypad and emulate the feeling of driving."


Geoff Crammond's 1993 *Grand Prix* set a precedent others were to follow

"It doesn't matter how badly programmed the game is, if you feel part of the game then you will probably be having fun" Gavin Raeburn, Codemasters

The ride of your life

TOCA's Raeburn adopts a simpler approach. "Total immersion in the game itself," he says. "It doesn't matter how badly programmed the game is, or whether it's a simulation or arcade game, top-down scroller or in 3D – if you feel part of the game and feel in control of the car you are driving, then you will probably be having fun." If proof is needed, ask Raeburn to list his favourite games and in between *Grand Prix 2* and *Colin McRae Rally*, you'll find the perfect illustration of his claim: "The car racing section on *Die Hard Trilogy*, because although the car physics are dreadful the feeling of involvement is absolutely spot on."

3DO *Need for Speed* remains one of the few games to convincingly recreate a car's weight

A top-down racer featuring little in the handling department that could be termed physics, *F1 Circus* on the Mega Drive may have never made it to western shores other than in its original arcade cabinet guise (or as a ridiculously expensive import), but it remained a thoroughly involving experience, mainly through atmosphere and attention to



AI

WITHOUT IT, A DRIVING GAME IS JUST AN IMPRESSIVE MATHEMATICAL EQUATION

Many years ago, racing game AI extended to CPU-controlled cars stubbornly following a predetermined line, lap after lap, until the chequered flag came out. As with every other aspect, things are a little different now. Without decent AI, impeccable gameplay, photo-realistic graphics, flawless structure and the world's finest vehicles would all amount to very little.

Poor AI is unconvincing. It reminds you that you're playing a game. In the case of Psygnosis' first *F1* title, you're reminded of this every time you attempt to overtake in a corner and your opponent consistently rams the side of your vehicle. Now, in *Daytona USA*, competitors career into you because they want you out of the race. Cars also ram you in *TOCA 2*, but usually only after you've hit them first. Each of your 15 opponents has his own personality, reacting differently to other track users. In *GP Legends*, drivers give you a pretty hard time, make mistakes and are hesitant about overtaking a damaged car unless you indicate a mechanical failure by holding your polygonal arm up in the air. And although its producer thinks it the weakest aspect of the game (see p44), in *Gran Turismo* an overtaken competitor will immediately move into your slipstream in an attempt at returning the favour, for example. Good racing AI should draw you in, give your opponents a more human feel which in turn enhances the realism of the whole game.

The move to 3D was crucial for the racing genre – it allowed the implementation of real-world physics models and believable environments

detail. Some 16 months earlier, *Vroom* on the Amiga had achieved similar results through the use of outrageous speed. And a little further down the road, Geoff Crammond's *Grand Prix* demonstrated that PC racing sims, however detailed, could be utterly captivating. And in full 3D.

Nowadays, of course, no publishing executive wishing to retain his position would dream of greenlighting a 2D racing game. The move to 3D was a crucial one for the racing genre – it allowed the implementation of the real-world physics models discussed above, and believable environments, to name but two immediate enhancements. In fact, so critical was this advancement towards 3D, that it's probably true that of all the titles currently being given a 3D overhaul, racing games have benefited the most. Raeburn, however, disagrees. "I think all game genres have taken a step closer to reality and have benefited from 3D – it's all getting back to this feeling of immersion within the game," he argues. "However, making things work in 3D is a lot more difficult than 2D. The closer you get to reality the more people compare your game with their own view of reality. It's like comparing reading a book to watching a film – the more information you are given, the more holes there are to pick at."









The *Ridge Racer* PlayStation series – members of a disappearing breed?

But Raeburn does concede that 3D cards represent the biggest evolution of the last few years. "These have allowed two things to happen," he states. "Obviously the graphics have become much more believable and photo-realistic, but also the use of 3D accelerator cards has eased the burden on the main processor, so it can do other things such as more sophisticated car physics and effects."

Power injection

As a PlayStation developer, Kazunori Yamauchi may not have 3D cards at his disposal, but his conclusion is, essentially, identical. "When we first started developing on the PlayStation, my first impression was the ability to freely use 3D graphics," he divulges. "Using 3D is a major improvement, of course, but eventually I realised that probably the most revolutionary aspect has been the increase in calculation power – no matter how many calculations are required, the CPU must always be able to cope."

And the future is all about processing power, with all the benefits associated with this increase. "Visually at least, we'll probably see racing games with nearly photo-realistic graphics in the very near future," believes Yamauchi-san. "As far as calculation power is concerned, soon we'll probably have a machine that'll allow us to make even more calculations. We'll have the hardware to develop the almost perfect racing game."

Raeburn sees limitations, however. "Well, graphics and sound will obviously continue to improve, but in the standard home setup I don't see much room for improvement in things like motion feedback or VR helmets – whatever technical innovations happen they will need to be cheap to have massmarket appeal," he warns. "The physics used within the game will also improve as processor power increases, but again this will be of limited use if sensory feedback from the game can't be cheaply improved. However, I would imagine network play will become more popular, especially with the possibility of modem support being included as standard on consoles such as Dreamcast."

Network play. This is another area Mike Lescault gets understandably excited about. The potential is massive, but currently things are not quite as they should be. "We're really kind of disappointed with the growth of the Internet," he laments. "We were hoping it would build faster and be more stable, because once it is you can do some great stuff – you can have some real fun racing. Even on LAN when we have people getting together it's great fun racing wheel to wheel with guys and sometimes you do touch wheels and it's usually pretty catastrophic when that happens – as it is in real life.

> "We don't want to guarantee people that they can play over the Internet, but we have provided them with the tools to do so" Mike Lescault, Papyrus

STRUCTURE

THE DIFFERENTIATING FACTOR BETWEEN A VIDEOGAME AND A SIMULATION

Sim-like driving games have long been the domain of PCs, but to assume that those titles were unlikely to appeal to a console-owning crowd because of their complexity is a gross misjudgment. The absence of sim titles on plug'n'play machines has always been a mathematical issue, and not until the arrival of the 32bit era had consoles offered processing power able to deal with the complex physics models required for simulating realistic car dynamics. With the technical side taken care of, developers were finally able to release console titles that had only been previously enjoyed by the PC fraternity. Yet releasing sims, however complex, wouldn't have been enough to satisfy console owners bred on games boasting a structure far ahead of anything seen on PC monitors. Take *The Need for Speed* on the 3DO, for example. Essentially an evolution of the early *Test Drive* games for the Amiga and ST, its realistic-handling vehicles would have amounted to little without superb track design, civilian traffic, police chases and CPU opponents to add the competitive edge. The resulting motoring cocktail remains one of videogaming's finest driving titles.

It may surprise you to find that the exquisite structure in *Gran Turismo*, however, was not premeditated. "The structure may have come out in the most ideal way, but this wasn't something I had planned," admits **Kazunori Yamauchi**, *GT*'s producer. "It was the result of all the discussions, all the problem-solving and meetings we had. We wanted to make a game that didn't exist before – we wanted as many people as possible to play and we wanted them to play for as long as possible."



Gran Turismo



Indy Car Racing 2



F-1 World Grand Prix **is a benefactor of increases in processing power**







Daytona USA **(left) was one of the early arcade leaders to support more realistic dynamics. Others, primarily** ***Sega Rally*** **(centre) and its sequel (right), have since followed in its tyre tracks**

Especially when you're mixing in AI players too, because sometimes it's really hard to tell whether the guy in front of you is an AI or a human – they'll both make mistakes, they'll both slide out a little bit, and they'll both drive pretty hard. But multiplayer is really important in racing sims, I think it's going to be the future. We just want to make sure that we're ready when the Internet can handle what we're doing."

Get connected

And when you look at the multiplayer options on *GP Legends*, you can't help feeling that Papyrus is right on track. "One neat thing about *GPL* is that it's really a dedicated flying server application so when you decide to host a race, even in singleplayer mode you're both the client and the server – you have a server running and the AI is connected to the server and you're connected to your own server so you can actually exit out and start fooling around with changing your setup and stuff. The AI is still out there on the track going around even though you can't see it," enthuses Lescault. "What this means is that people can connect and leave as they want while the server is on. And it's really cool because you could be racing with five AI players, five people from a LAN and five people over the Internet, so you could really have all that for a field of 15, 18, 20 people all coming from different areas which is kind of neat and I don't think anybody's ever done that for a racing sim."

"We're pretty excited about the multiplayer options but we're not going to say on the box 'play over the Internet'," he adds intriguingly. "Because it's a racing sim, it's all about crashes, and when you're wheel to wheel with somebody even a little bit of latency can cause problems – if you have any more than a quarter to half a second of latency you're getting into trouble trying to play *GPL* over the Internet and that's just something we can't control so we don't want to guarantee people that they can play over the Internet, but we have provided them with the tools to do so."

So, perhaps predictably, digital racing fans can look forward to more realism; photo-realistic graphics, improved sound, authentic dynamics, Internet play for the ultimate opposing AI, and a possible active control system to realistically convey what's happening on the wall-mounted Plasmatron screen. True, it doesn't sound particularly revolutionary, but then the driving game is hardly the genre most open to dramatic change. Think of it more in terms of a gradual evolution. Of course, there are some who feel that tomorrow's consoles would be wasted on a simple racing concept. "Such machines will probably be too good for just making racing games, so we may have to think about using such calculation power for something else," says Yamauchi. "We should be using that powerful hardware to make other types of simulators, simulators which would deal with humans or the human mind, for example. But as far as racing games go, you'll see a perfect example in the very near future."

That should please Alain Prost.

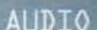


***Ultim@te Race Pro*: an example of how a lack of structure can severely hinder a promising game**





Licensing at work in *Racing Jam* (top) and *Max Power Racing* (above)



AUDIO

AN INTEGRAL – YET OFTEN OVERLOOKED – FRACTION OF THE PROCEEDINGS



Gran Turismo



TOCA



GP Legends

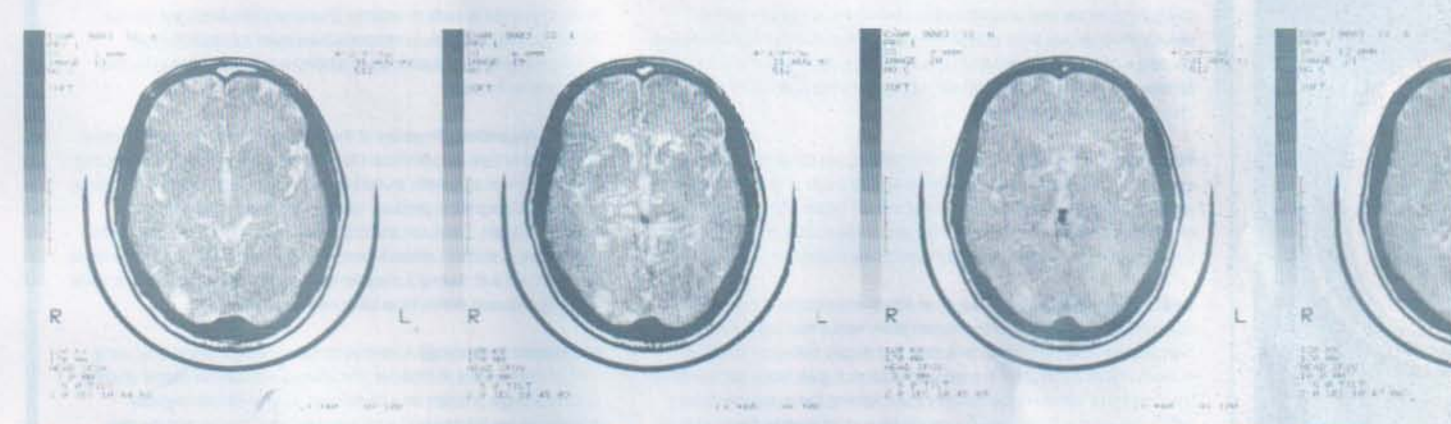
If you've already read this issue's *Gran Turismo 2* preview (see p44), you'll know that Kazunori Yamauchi, the game's producer, was disappointed with the sound in *Gran Turismo* and wished he'd had more time to improve it so that it matched up to the standards of the game's other areas.

With the arrival of CDs as a storage medium for games, the audio reproduction is usually a case of sampling and compressing the real thing. Yet given this relatively simple process, **Gavin Raeburn**, producer of the *TOCA* series, still feels that not everyone is getting it right. "Sound is often an overlooked part of racing games, but is, I feel, one of the most important areas," he asserts. "Playing *TOCA* with the sound turned down is a very odd experience when you're used to playing it with the volume cranked right up. You lose the sense of being there, and feel very distant to the action. Sound should be used to give atmosphere in the build up to the race, and especially to give feedback on how the car is driving during the race (tyre squeals, crashes, cars creeping up behind you, etc)."

Unable to drive the Ferrari in *GP Legends* unless the volume is set at eardrum-numbing level, **Edge** knows exactly what Raeburn means.

MAN VERSUS

After years battling a multitude of enemies, gamers are finally meeting their match with a more believable kind of opponent. Edge looks at the evolution of artificial intelligence and its impact on the next generation of videogames



THE MACHINE



The arrival of *Half-Life* has been a real wake-up call to the world of videogaming, ushering in a new age of truly challenging, seemingly free-thinking opponents. Ostensibly a reworking of the *Quake II* game engine and genre, Valve Software has used this solid foundation to conjure up the most terrifying and absorbing gaming environment in existence.

Graphics play their part, but the real reason *Half-Life* manages to draw the unsuspecting player into its alternate world of dimension-hopping aliens and lethal Black Ops troops is the way these characters have been brought to life with a dazzling array of behavioural patterns and quirks. In *Half-Life* it's the player that's the cannon fodder, the sitting duck, and the one most likely to make silly, and therefore fatal, mistakes. Game-based artificial intelligence has come of age.

Valve's **Gabe Newell** explains that *Half-Life*'s approach encompasses three major areas, covering the overall architecture, specific features such as navigation, or the use of senses within that framework, and finally the creatures which utilise these features.

"The first two aspects are pretty challenging technical problems, but they are fundamentally just technical problems," he asserts. "Designing the individual creatures so that they had unique and interesting gameplay, so that they would work in the spaces we had designed, and so that they fitted into an overall progression that had to relate strongly to both the weapons and where we thought the player would be in understanding how the game worked was the hardest part. The creature designs weren't just technical problems, but a creative and aesthetic problem as well, where every choice affects all of the other choices you make."

This highlights an important aspect of how AI is applicable to games. It's not so much the intelligence that matters as the creation of characters capable of exhibiting identifiable behaviour. It's easy to create a game where the

computer wins every time, it's harder to inject a level of personality into that behaviour and imbue it with human flaws. Recent developments haven't been about games simply getting smarter and harder to beat, they've been about their inhabitants acting with greater cunning using human-like traits.

It's not only the way the various breeds of alien act and respond to the player's actions in unique ways that makes the *Half-Life* ensemble so effective. These enemies also interact with one another, the communication most obvious when squads of Black Ops grunts pin the player down with coordinated attacks.

"Once we went with groups of characters communicating back and forth among themselves, and deciding what actions to take as part of a larger whole, we started to see a lot of very complex behaviours well beyond what the code would suggest," says Newell.

The art of creating convincing, challenging foes isn't simply a matter of piling on the behavioural quirks, however. "The Human Grunts, our most successful character, have about 25



***Thief*'s AI is progressive. Guards listen out for noises, and work with each other to locate you**

"There's a threshold where the characters go from being mindless automatons to being compelling opponents" Gabe Newell, Valve

NEW WAYS OF THINKING

Crucially, there are new developments in the way AI is implemented to consider. Few games have strayed from the method outlined by Gabe Newell of using a relatively simple set of behaviours to produce seemingly complex behaviour, but some believe that the future lies in more complex methods. These are the main contenders:

Fuzzy Logic Fuzzy logic and fuzzy state systems are designed to handle the concept of 'partial truth', valuable for the linguistic side of academic AI, and useful in gaming terms for having characters act 'intuitively' in imprecise and undefined situations. The *Close Combat* series has made some use of fuzzy logic, and it will be used in Activision's upcoming *Civilization: A Call To Power*.

Neural Networking Making use of an interconnected set of nodes (an approximation of neurons in the human brain, hence the name), neural nets are able to identify patterns in data, and modify behaviour based on it. It can enable a character in a game to learn as it goes. Many games imbue their creatures with a limited memory (even fighting game opponents learn what moves a player favours), but neural networking enables these artificial creations to learn about their environment and the actions of other creatures by modifying the AI code in realtime. Characters effectively get smarter the longer they 'live'. Neural networks have been successfully used in the *Creatures* titles. *Battlecruiser 3000AD* is the next game to try the technique on for size.

Genetic Algorithms These are at the heart of artificial life, an alternative to standard AI (see AI vs Artificial Life, p64). They treat a number of building block algorithms as genetic blueprints. This not only helps define behaviour, but makes it possible to produce 'children' by mating and mutating algorithms. Again, *Creatures* and *Creatures 2* use this. Genetic algorithms also feature in William Latham's work, helping to create the evolving images in *Organic Art* and making it possible for new creature types to breed in the yet-to-be-released *Evolva* (now sadly without a publisher).

Blackboard Technology A method for determining a reaction by using a set of independent AI modules. The analogy is a team of people working to solve a single problem on a blackboard. Atomic Games originally intended to use blackboard technology on *Close Combat*, but the idea never actually made it past the planning stage.









***Unreal*'s 'deathmatch' game (top) with computer-controlled bots is admirable, but flawed. Westwood's *Tiberian Sun* (above) sports far more complex AI coding thanks to more diverse abilities and varied terrain**

basic behaviours whereas the Assassin, also very successful, only has about ten," Newell continues. "There seems to be some critical threshold where the characters go from being mindless automatons to being compelling opponents, but I don't think we are exactly sure where or why that is."

CALL AND RESPONSE

The computer game AI story really got going with *Eliza*, who had a way with words despite being nothing more than a computer program. Developed in 1966, the aim of *Eliza* was to fool users into believing the computer responses were being generated by some unseen human by constructing answers using the user's own words and sentence structures. *Eliza* might not have provided a true artificial intelligence model, but it was able to satisfy some of the criteria set out in the famous Turing Test.

Born in 1912, Alan Turing was an English mathematician, breaker of the German's Enigma code during WWII, and now regarded as a leading influence on modern computing. In a paper entitled Computer Machines and Intelligence (a copy of which is on the Web at http://www.sscf.ucsb.edu/~sung/comm115/writing-define-computing/Computing-machinery.html) he postulated a situation in which a computer would be interrogated using only text messages. If the interrogator is unable to distinguish whether the replies are human or computer generated, then the computer is defined as intelligent. This idea is now used as the blueprint for all artificial intelligence.

Surprisingly, the work done by *Eliza* failed to lead anywhere in game AI terms, and for the next few years attention fell on computer chess programs. As Gabe Newell says, "While undoubtedly clever, these rely more on computational power rather than

behaviour modelling. It wasn't until the late '80s that game developers really had something to work with, when Rodney Brooks at MIT began publishing papers about algorithms based on layered behaviours that were easy to implement. The key lay in using very simple rules that provide the right results in certain conditions, rather than going to extraordinary lengths to simulate all the nuances of human behaviour."

When coin-ops and, later, home consoles and computers took a hold in the late '70s and early '80s, creating artificially intelligent opponents was the last thing on programmers' minds. Early computer games were reaction-based, usually relying on the number rather than the cleverness of opponents to provide a challenge. In hits such as *Space Invaders*, *Pac-Man* and *Asteroids*, the environments were always abstract and portrayed on a single fixed screen with just two axes of movement, so there was little need (or room) for AI. And even after Brooks' work was published, programmers were slow to latch on to AI. Time, effort and processing power were generally ploughed into the visuals, particularly once polygon-based 3D caught gamers' imaginations.

TAKING ORDERS

Early wargames provide an insight into the implementation of AI in computer games, but even here there's abstractness to the gameplay that restricts just what can be achieved. Their turn-based nature instantly erects a barrier between the human and computer opponent, removing the ability for enemies to react in realtime to a tactic. And when a whole day's manoeuvres are simulated in a single turn it becomes almost impossible to detect any nuances of behaviour.

Games geared more towards empire building than straight combat do provide further room for behavioural quirks. *Civilization*, in particular, deserves a mention for its computer AI code. Play it and the impression is of an opponent that actually thinks and even makes mistakes, rather than following a set of chess-like rules.

On the whole, though, a realtime environment is essential for impressive game AI. Which is why Westwood Studios' *Dune 2* and *Command & Conquer* are viewed by many as milestones. As the first realtime wargames with massmarket appeal, they were able to calculate and portray army moves on the fly, reacting instantly to the player's strategies and modelling both unit and leader behaviours, while at the same time ensuring the units under player control acted sensibly without the need to micromanage every move. This simple change instantly makes it difficult to distinguish whether an assault, for example, is coming from the computer or another player. There are flaws in the systems used by these games, but they do a good job of guiding a whole army of units in a suitably militaristic way.

The next *Command & Conquer* title, *Tiberian Sun*, is set to bring Westwood in line with other RTS developers such as Cavedog (with *Total Annihilation*). **Bret Ambrose**, programmer on the *C&C* project, explains the approach taken with this latest title: "Unit AI in *Tiberian Sun* is a mix of old and new. Some sub-systems, the pathfinding, for example, have been completely ripped out and replaced with superior implementations. Other systems, like the unit missions, have been kept over from previous *C&C* games. These older systems have been revised, expanded and extended, though. We now have new missions and behaviours for AI units to follow." These include the ability to scout, capture and infiltrate, traits that have the potential to open the gameplay completely.

THE RISE OF THE DEATHMATCH

Ironically, the game that's had the most influence on computer game AI doesn't do anything very clever at all. *Doom* has been responsible for pushing programmers to improve opponent intelligence more than any other game, simply because it's so much fun as a multiplayer experience. By the time *Quake* arrived id Software was concentrating almost solely on this element, Internet support bringing multiplayer battles to the masses.

> "Gamers want a challenge, they want a computer-controlled opponent to act like a human so they can have as much fun playing alone as playing online" Tim Willits, id Software



IT'S ALIVE!

Some of the more unusual examples of seemingly intelligent computer game behaviour:

Eliza (1966) The grandmother of all AI creations, *Eliza* was conceived as an academic project, but became something of a favourite parlour game program for home computers in the early '80s, with magazines regularly printing programs 'inspired' by the original. *Eliza* is primitive by today's standards, but still throws up the occasional smart response. Try out an online version of *Eliza* at http://www-ai.ijs.si/eliza/eliza.html.

Little Computer People (1985) David Crane's Commodore 64 program provided many computer owners with their first glimpse of AI. It features a house, complete with bedroom, kitchen, lounge and gadgets such as a stereo and telephone. Wandering around this house is a sprite character, initially checking out his new home, then settling down, playing records, eating, sleeping, even writing letters and playing cards with the user. Not really very AI-orientated, but endearing all the same, and certainly more advanced than Tamagotchi (unleashed some ten years later).

Creatures (1996) The first offering from Cyberlife follows in the footsteps of *Little Computer People*, but uses far more advanced techniques to create its own variation on the ant farm concept. Using artificial life techniques, it's possible to hatch creatures known as Norns, feed them, teach them the concepts of right and wrong, and even get them to talk. Each Norn has a limited lifespan, but by breeding them it's possible to create offspring with markedly different behaviours.

Sentient (1997) Psygnosis attempted to inject new life into the adventure genre with a raft of clever ideas. Complex personality modelling and advanced sentence-based communication are used to populate a spacestation with a whole team of workers, where each are going about their own business, talking to each other, and reacting to what happens and what they learn. Impressive stuff, unlike the rather tedious gameplay itself.

The popularity of deathmatches has given shoot 'em up fans a thirst for more challenging opponents in singleplayer outings, something that programmers have been quick to take note of.

Tim Willits, level designer at id, agrees. "Many gameplayers today have experienced multiplayer games against other humans, they have played against an intelligent opponent who is able to learn, be unpredictable, improve, and adjust their style of play to win. Once gamers experience that level of sophistication in an opponent they have less desire to play against lesser enemies. They want a challenge, they want a computer-controlled opponent to act like a human so they can have as much fun playing alone as they do playing online."

Westwood's Bret Ambrose isn't convinced good AI will ever provide an adequate substitute for multiplayer gaming. "People play multiplayer games for two principal reasons: the social community that builds up around games, and the variety and challenge that a human opponent provides. We will never be able to program the social aspects of online gaming, but if we ever reach a point (essentially the Turing Test of computer gaming) where a player can no longer tell the difference between a computer opponent and a human one, then it might be time to retire. I don't see that happening anytime soon, if ever, though."



The AI code in *Half-Life* not only brings alien creatures to life, they can hunt in packs. Allies and enemy soldiers also have believable attributes

"If we ever reach a point where a player can no longer tell the difference between a computer opponent and a human one, then it might be time to retire" Bret Ambrose, Westwood Studios

Nevertheless, it's something the deathmatch community has been working towards for some time. Steven Polge's *Reaperbot* add-on for *Quake* provided the first taste, using an efficient set of algorithms to guide artificial deathmatch opponents or 'bots'. Polge also worked on *Unreal*, where computer-controlled enemies in the singleplayer game frequently dodge fire and even run away if the battle is going badly. Several creature types also successfully make use of flocking, a technique to simulate pack behaviour and movement. A singleplayer deathmatch option is also included in *Unreal*, though the AI code is rather less effective here.

And it's the concept of the human-versus-bot deathmatch that *Quake III: Arena* (see p38) will be built around. This time id Software isn't even bothering with a standard story mode, instead paring the formula down to single- and multiplayer variations of the ever-popular co op and deathmatch games. Id's **John Cash** is the man coding *Quake III*'s AI. He admits that id didn't bother with any feasibility tests before deciding to opt for a deathmatch-only game. "We really didn't feel this was necessary. The number and quality of bots that have been produced by the gaming community for *Quake* and *Quake II* was proof enough of the feasibility."

John Carmack's improved code for *Quake III: Arena* promises to deliver far better Internet play and the graphical power necessary for id's artists to shame most of the PC's current crop of accelerated titles. But it's Cash's AI work that promises to really make it such a landmark title. "The goal is to develop human character frailties," he explains. "There will be characters who make basic mistakes, characters who use some common sense, and those who will be deadly like a super-good player." The idea is not only to create a challenging opponent, but one whose style can be learned and used against it. Computer enemies should even be able to use tactics such as rocket-jumping.

"The current AI enables us to put bots into a map and play against them," says Cash. "A great deal of the work to this point has been for the actual combat logic, so they can be pretty nasty in a firefight. There is always much more that you would like to do than you will ever have time to do."

Cash agrees with Valve's Gabe Newell that creating good AI is, essentially, an artistic task. There's always the danger of creating AI that's just too clever, rather than

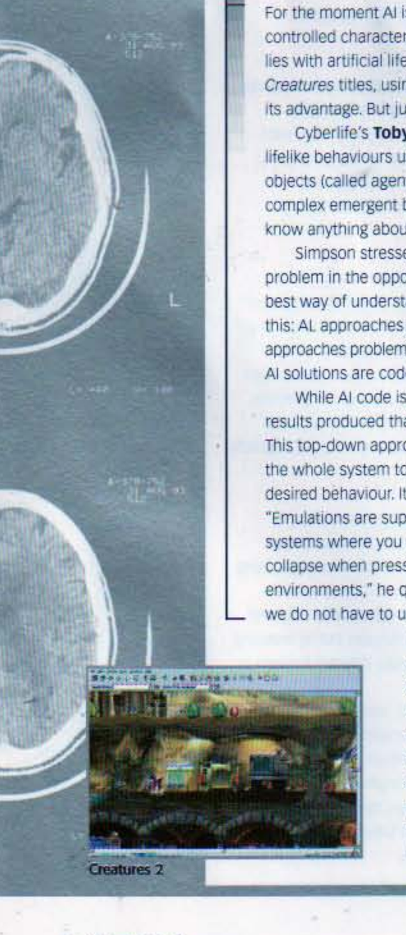
AI VS ARTIFICIAL LIFE

For the moment AI is powering the behaviours of computer-controlled characters in games, but some believe the future lies with artificial life. Cyberlife has already proved this in the *Creatures* titles, using the more ambitious kind of modelling to its advantage. But just what is artificial life?

Cyberlife's **Toby Simpson**: "Artificial life is the creation of lifelike behaviours using large populations of autonomous objects (called agents) that when combined produce more complex emergent behaviour where none of the individuals know anything about the emergent behaviour that occurs."

Simpson stresses that artificial life approaches the problem in the opposite way. "Although a generalisation, the best way of understanding the difference between AL and AI is this: AL approaches problems from the bottom-up whereas AI approaches problems from the top-down, or outside-in. Typically, AI solutions are code driven and AL solutions are data driven."

While AI code is concerned with superficiality, it's the results produced that matter, not the processes behind them. This top-down approach means you need to fully understand the whole system to produce the code needed to replicate a desired behaviour. It's emulation rather than simulation. "Emulations are superficial, and although ideal for simple systems where you understand the whole system, they collapse when pressured to create massive virtual environments," he qualifies. "Developing from the bottom-up we do not have to understand the whole system in order to replicate the desired behaviour. Instead we model the building blocks of a system and rely on emergence to fill in the gaps. We've created a biological modelling system that allows us to 'build' biological systems inside computers, that go on to solve problems. Computers cannot be intelligent, however computers can model systems that can in themselves be intelligent. It's a sort of biological Lego set."



Creatures 2

challenging in the right ways. "The challenge of creating good AI for a deathmatch game is to make the player feel like they're competing against another player instead of a machine. To do this the AI mustn't be *too* good. Meaning that it needs to miss shots, stay in a losing fight, make predictable moves… all the mistakes that a real player makes. The trick is to do it in a believable fashion."

A BETTER CLASS OF ENEMY

Some developers are already working on more advanced methods of emulating intelligent behaviour (see New Ways of Thinking, p46), but the results so far have been mixed. It's arguable that it's not necessary to model every characteristic of a creature to make it believable. It's the result not the method that matters. "Good AI code is sort of Zen – it is as sophisticated as it needs to be without being any more complicated," concurs Newell. "Really complex gameplay emerges out of the intersection of thoughtful simple behaviours, not a really complex design. The tricky part is picking the right simple things to build on, which takes a lot of experience and some luck."

"If simple ideas and techniques are all that's necessary to provide this functionality (the ghosts in *Pac-man* don't need complicated pathfinding routines, for example), then advanced AI techniques certainly aren't needed," adds Westwood's Ambrose.

Newell points to the problems with *Trespasser* as an example of how attempts to simulate real situations can get out of control. "In talking with some of the *Trespasser* designers, they got themselves in trouble by insisting that everything had to be simulated, and they just couldn't simulate well enough to create fun and entertaining behaviours. The T-Rex never walked under the crate that was suspended by a rope you could shoot out… A good AI system allows you to blend both simulated or AI-driven behaviours with authored events in a seamless way."

Looking Glass Technologies' *Thief* is an ideal example of this approach. Scripted situations are blended with imaginative AI, characters possessing the ability to hear noises rather than simply relying on line-of-sight to spot the player. When combined with an ability to communicate with others – calling for help, sounding alarms and even calling out into the dark – the results are spellbinding.

Clearly, the challenge for developers is to create interesting and finely tuned AI code. That doesn't necessarily entail making use of advanced and lofty AI concepts, it's the resulting behaviour and not the formulae used to generate it that matters. "Most academic AI research is directed towards making computers intelligent, as opposed to just making them seem intelligent, which is all that's really important in games," points out Newell. "Traditional academic research also emphasises highly complex internal states, which is not only very difficult to program, but hiding the internal states is really the last thing you want to do in an action game."

And it's important to remember that it's not always about providing players with opponents as good as other humans. Playing *Quake* or *Half-Life* in singleplayer mode would be pretty frustrating if every single enemy was as tough as a deathmatch opponent. "Creating AI that is too tough is very easy, almost more so than creating AI that's too weak, and in between is a very delicate balance," says Newell. "AI is just a tool, and your goal is to create entertainment. There are lots of ways you can fall in love with your own ideas and leave the gamer out in the cold."

Ironically, the ultimate goal is to create AI that's almost invisible. As Cash asserts, "Bad AI is more noticeable than good AI, so when it's really good you don't realise it unless you stop to smell the roses."

What gamers now need are computer-controlled opponents and allies that act in a way that helps to promote the believability of the game environment. Just as game worlds are becoming less abstract, a greater sense of immersion is arising from improved visuals, more interaction with objects and judicious use of realworld physics, so the inhabitants of these worlds need to act in ways that reinforce the illusion of solidity.

The final word goes to Newell. "I know of other game developers who have commented that character AI is a dead end and that there's nothing more to do. I'm of the opinion that we've barely just started."

"The AI mustn't be too good. It needs to make predictable moves, all the mistakes that a real player makes. The trick is to do it in a believable fashion" John Cash, id Software





The AI in *Quake III: Arena* will be crucial to its success. The bots will display different personalities but all will be capable of human-like mistakes

HOW AI WORKS

The code required to bring a game character to life can be broken down intro three distinct areas:

Navigation This encompasses pathfinding and general use of the environment. How a *Quake* bot or *C&C* tank reaches its destination is defined by this. As id Software's **John Cash** says, "It's remarkably hard to get a bot from A to B without them looking like an idiot." Pathfinding often involves using a process such as Dijkstra's Shortest Path Algorithm, but there are also the differing kinds of movement for each unit to consider. Westwood Studios' **Bret Ambrose**: "In *Tiberian Sun* some units can hover, others burrow underground; infantry can move through areas occupied by forest, mechanical units can't; some units can crush walls, some can destroy them, and others have to find their way around." Evidently, getting from A to B requires a lot of solid coding.

Strategy The tactics that creatures can call upon are to be found here. Cash explains how this relates to *Quake III: Arena*. "The tactical AI governs combat, circle strafing, jumping, reversing over health packs while you're fighting, that kind of thing." In other words, it's what helps provide the character with the appearance of common sense. Navigation stops a monster from running against walls, but it's the strategy AI that makes it clever enough to attack from behind or dodge a bullet.

Behaviour Any quirks or signature abilities are covered by behaviour. These include line-of-sight and distance-of-sight values as well as the ability to hear noises, see only in certain lights, and so on. Tendencies such as when to retreat, what moods are possible (such as being scared, aggressive, alert or asleep) might be needed, as well as the likelihood of making mistakes. Some creatures might also have the ability to communicate information to other creatures, or to form packs with them. It's this final element that requires the most artistic talent, but really brings a creation alive when done right.

TESTSCREEN

The definitive monthly assessment of the world's latest videogames

The plumber and the hedgehog

Curious as to how *Sonic Adventure* had been received by the world's hardcore gaming community, **Edge** attempted to gauge players' initial reactions – and rather alarmingly found a number of them looking to directly compare the spiky blue hedgehog's outing with the antics of a super Italian-American plumber on the N64 and recalling attributes of the older, time-honoured game in order to define those of *Sonic Adventure*. Why the comparison? After all, the two are in fact worlds apart. *Super Mario 64* redefined the platform genre by bringing it kicking and jumping into the 3D age, giving a persuasive indication of the possibilities offered by the addition of an extra dimension in the process.

Yet, *Super Mario 64* isn't a true platformer. At least, not in the traditionalist, two-dimensional sense of the word. This is by no means a criticism, simply yet another illustration of Miyamoto's genius in his ability to not only innovate an entire genre, but to create a product that two-and-a-half years after its arrival still looks down upon all around it (with the exception of Rare's *Banjo-Kazooie*) from a very great height.

On the other hand, the team responsible for Sonic's latest videogaming outing (see p70) stuck to a very different design brief. Yes, *Sonic Adventure* adopts a 3D environmental approach, granting Sega's mascot more freedom than simply the left/right movement it had mostly enjoyed until now, but its gameplay remains stuck in 2D land. It is evolution to *Mario*'s revolution.

This is the essence of *Sonic Adventure* – it's a remarkable example of 2D platforming hiding beneath a 3D, polygonal cloak. While *Super Mario 64*, because of its revolutionary approach, forced an equally novel gameplay style on those who played it, as far as the *Mario* series was concerned, *Sonic Adventure*'s core remains closer to its Mega Drive-powered ancestor. That's not to say it's better, or worse – just different.

Which is why pitting the two against each other is ultimately a fruitless exercise. It would be tantamount to placing *Ridge Racer Type 4* alongside *Gran Turismo* on the starting grid of some twisted videogaming grand prix. There could be no winner, regardless of which one managed the fastest lap times, adopted the best line in and out of corners and eventually passed the chequered flag first. Regardless of superficial similarities in structure and cosmetic terms, *R4* and *GT* will always race on different circuits knowing that their respective gameplay tracks will never cross.

Similarly, Sonic and Mario may never meet, and **Edge** doubts that they were ever meant to.



Despite the step into a 3D environment *Sonic Adventure* (left) isn't far removed from its 2D platforming roots (centre). Whereas *Mario 64* (right) redefined the genre, *Adventure* is assured success by Sonic fans

Index

Edge evaluates games on a scale of ten, where five naturally represents the middle value. A game receiving a 'seven out of ten', for example, is a competent title with noticeable flaws but which should still appeal to a considerable range of players – naturally more so to those who favour the title's particular genre. It does, after all, score two points above average and should therefore not be considered as such.

Edge's rating system is fair, progressive and balanced. An average game deserves an average mark – not, as many believe, seven out of ten.

Videogames on the **Edge**

The games that have seen Edge into the small hours this month...



Zelda: Ocarina of Time (N64) Nintendo
Not everyone in the **Edge** office has been able to find the time to finish NCL's magnum opus – which makes all talk of it officially banned during work hours.



Capcom Generations 4 (PS) Capcom
This retro package, gathering together the classic *G'n'G* series, has been a potent reminder of how much more patient gamers once were...



OutRun (Sega Ages) (Saturn) Sega.
This month's driving game overtones brought about some dusting down. When will the likes of Magical Sound Shower ever be realised again?



Turok 2: Seeds of Evil (N64) Acclaim
It may not have the fairest learning curve ever set in silicon, but Iguana's title is a classic gamer's game, demanding that you scour every corner to succeed.

SONIC ADVENTURE











Fast and furious, graceful and grand, Sonic is definitely back. Those expecting more *Mario 64* will be disappointed. Those demanding more Sonic will not





Love interest Amy Rose's mission proves one of the hardest to complete – she's plagued by a rogue robot (bottom)



While smaller objects suffer from a fair degree of pop-up, larger scenery is maintained to an impressive extent, such as in the Windy Valley (above)

Notching new benchmarks for the next generation of videogame software was never going to be an easy task, but Dreamcast's launch games clearly undersold the new console's potential. That situation has now been remedied.

In every conceivable aspect of the experience it offers, *Sonic Adventure* is a superior piece of interactive entertainment to its peers, although the deep pool of Yen that Sonic Team was given access to has clearly aided the game's development. The title's audio tracks alone were the work of over a dozen musicians, while the final tally of graphic artists is over 50. In this respect, *Sonic Adventure* is a member of the videogame superleague, matched only by *Super Mario 64* and *Zelda: Ocarina of Time* in its scale as a development project.

Sonic Adventure could never have existed on either PlayStation, N64 or Saturn. Such is the scope and speed of the action that, as yet, only Dreamcast can handle the game's technical requirements. Just as *Mario 64* pushed the Nintendo 64 during its gestation period, so *Adventure* takes Sega's new machine through its paces. It also marks the significant return of one of the videogame world's most popular and charismatic icons, and the only one to have ever threatened Mario's throne.

Adventure is a thirdperson platformer which follows the story of Sonic as he battles, as in earlier iterations, to defeat arch-adversary Dr Eggman (aka Dr Robotnik in the west), who has created a new menace for the world in the shape of the Chaos monster. This curious concoction is



Textures are fantastically varied, while vast areas are stored in memory for Sonic to sprint across. Loading times are rarely intrusive and never last long





Format: **Dreamcast**

Publisher: **Sega**

Developer: **Sonic Team**

Price: **¥5,800 (£30)**

Release: **Out now (Japan)**



Casinopolis sees Sonic being flung about two pinball tables. He can even be pelted off on a quick tour of the *NiGHTS* landscape (top)

formed from a cocktail of water and 'Chaos Emeralds', and it's these gems that Sonic initially sets out to recover, although Eggman soon turns this to his advantage.

It's a good sign of how well the story has been scripted and animated that while **Edge** was keen to understand more of the characters' dialogue, the gist of what was happening transcended the large amount of both written and spoken Japanese. However, it may be that the eventual English translation unveils an overly obvious narrative, as many purists felt of the *Mario 64* conversion.

Adventure's plot is, like all stories, linear in structure, but the game avoids tumbling into tedium through three factors. The first of these is the employment of a 'hub-and-spoke' system of level design, with two central locations, Station Square and Mythical Ruin, giving access to the ten other stages. It's in these central areas that the story unfurls, with gameplay divided between what Sega terms as 'research' (hub) and 'action' (spoke) sections. Also revealed in the hub areas is the second reason the game avoids linearity, in the form of five additional, playable characters. The third factor, meanwhile, is their ability to access a selection of the same levels as Sonic, but to play them in a manner that suits their distinct abilities.

Sonic Adventure **could never have existed** on either PlayStation, N64 or Saturn. **Such is the scope and speed of the action** that, as yet, only **Dreamcast can handle the game's technical requirements**

The mixture of old and new extras are introduced to the proceedings as Sonic progresses through his portion of the story. Tails is a twin-tailed fox able to fly both aeroplanes and under his own steam; Knuckles is an Echidna ('an Australian toothless, burrowing mammal', according to **Edge**'s dictionary) and can both climb walls and bury for items; Amy is Sonic's sweetheart, usefully armed with a 'love' hammer (it scatters pink hearts upon striking the ground); Big the Cat is an overweight feline equipped with a fishing rod; E102 is a laser-bearing droid created by Dr Eggman before defecting – thanks to Amy's charms; and Sonic is, well, Sonic, complete with a lightning-fast charge move. As in so many Japanese-developed titles, the characterisation is far more inventive and better realised than in contemporary western games, with all six proving strong and playable options.

The previous *Sonic* games (which helped to sell Sega's 16bit Mega Drive into millions of homes) have always been about speed, and this new instalment is no exception. There are some breathtaking moments of pace and drama.

Emerald Coast, the first of the heroic hedgehog's action levels, sets the tone for the remainder of the game

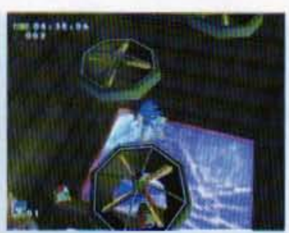


All six characters are very playable, but Sonic and Knuckles (above) are perhaps the best. The Echidna's climbing skill changes the way you tackle the levels



Later level designs are far more interesting and challenging than those before. In this scene, Sonic must ride the snake as it curls its way past various switches







Knuckles takes control of the Sky Deck (above), while Sonic proves it's all done with mirrors (top centre), and floats across a chasm (top right)







***Adventure* is scattered with sub-games, such as Amy's 'smack the Sonic' (top) and Big the Cat's various fishing exploits, which are remarkably tricky to succeed at**

with its exquisite textures and near-constant 60fps screen update. Realtime lighting is used to turn day into night, while fogging appears only to create banks of cloud for the Sky Deck level to pass through.

Occasional scenery pop-up is still noticeable in the very far range, while smaller objects tend not to be drawn until they are in the middle-distance. While the former aspect never affects the gameplay, the latter intrudes more regularly – most seriously in fast moving sections which require Sonic to collect rings, a task made doubly difficult by their non-appearance until it's often too late to change direction. Controlling Sonic and co is no more difficult than other 3D platform games, although Dreamcast's higher resolution and rapid screen refresh definitely aid in judging the position of the characters.

Sampling one of the earlier levels out of context could leave many with the impression that *Adventure* is a flashy but essentially shallow experience. It isn't until a good portion of the game world has been explored with a few of the characters (which are played as separate yet interwoven stories, of which Knuckles' take is perhaps the best) that the charm and style of Sega's title is fully appreciated. When you first realise that the Mythical Ruin is visited either side of a thousand year gap, in both its original glory and when overgrown with trees and dirtied with age, you can do little but smile in admiration at the calibre of the work that created it.

Meanwhile, various sub-games, such as Amy's sideshow of hammering the pop-up animals, or Tails' shoot 'em up biplane chase towards Dr Eggman's spaceship, the Egg Carrier, make for convincing and worthy adjuncts to the core platform games. It must be said, however, that none of *Adventure* is hugely challenging to the experienced player, but the sheer quantity and variety of what's on offer makes for a passable balance.

In addition, there is a separate set of distractions themed around A-life creatures (conceptually inherited from *NiGHTS*), Tamagotchi-like virtual pets which are raised in Dreamcast's VMS units from eggs found in the game. These can be cross-bred with other baby animals which are collected as bonuses in the action stages, and entered in oddball competitions such as egg pushing. More than the main game, this secondary entertainment is obscured by the amount of Japanese text involved, if only because the gameplay is such unfamiliar fare.

Other touches, such as having skill power-ups for each of the six protagonists which change the way the action stages can be tackled, are also well integrated into the overall feeling that a great deal of consideration was put into the design of *Adventure*'s game experience.

Less admirable is the obvious haste that has been taken with refining the game; the whiff of fine polish which permeates Miyamoto's finest is notable by its absence here.

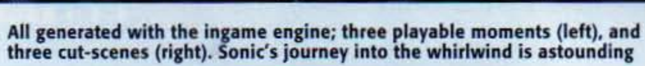












All generated with the ingame engine; three playable moments (left), and three cut-scenes (right). Sonic's journey into the whirlwind is astounding



Various sub-games make for **convincing and worthy** adjuncts to **the core platform games**. It must be said, however, that **none of *Adventure* is hugely challenging** to the experienced player

While *Adventure*'s graphics rarely glitch, there are several niggling occurrences of characters not relating correctly to the scenery, although these are usually at points that were perhaps never intended to be stood upon. **Edge** only managed to discover a few places where poor collision detection detracted from the gameplay; most notably by the entrance to the Red Mountain stage, and where the barriers on Emerald Coast failed to prevent Sonic being cast into the ocean. Given the never-before-witnessed scope and detail of *Adventure*'s levels these are forgiveable – but somehow the smaller problems are not, even though both are similar in nature.

Similarly, the distinctly artificial movement of the camera during the many cut-scenes (which, bar a couple of exceptions, are rendered with the game engine rather than being FMV) jars against the effort expended in the storyline and characterisation. The camera's occasional visits behind walls do little to aid the case for forgiveness, either, although it never frustrates to the extent that *Banjo-Kazooie* does.

In the overall picture, such criticisms are minor flaws in an otherwise very fine piece of work. Level design is strong, although the best moments, such as the spiralling stone snake in the Lost World or the shifting gravity of the Sky Deck, are left until later areas – it would have been welcome to see some of that inventiveness earlier in the game, rather than a reliance on flinging Sonic around at speed. However, **Edge** is thankful Sega hasn't made the mistake of attempting to turn Sonic into Mario, instead building on what made the previous *Sonic* titles a success, and in the process recreating the true feel of a classic 2D platform game in 3D for perhaps the first time.

Despite the lack of final polishing (Sega had little option but to release *Adventure* before Christmas or face a barrage of bad press), this is a massively ambitious title that manages to deliver a wonderfully absorbing game experience.

Edge rating:

Eight out of ten



In true platform game tradition, a number of end-of-level bosses must be defeated in order to progress to later stages, and to further the plot

R4 – RIDGE RACER TYPE 4



The game is Jogcon compatible, although becoming adept with the new controller takes some time













The CGI intro may not be up to the standard of some other Namco efforts, but it still serves its purpose

There may not be 321 'true' cars in the game (numerous variations make up the numbers), but there's a compelling line-up nevertheless





Shoot 'em ups and platform games may have swerved in and out of favour over the years, but the racing game has retained a consummate appeal, titles such as *Pole Position*, *Super Sprint* and *Ridge Racer*, in their own time, proving irrepressible lures. So it's little surprise that Namco's most ambitious PlayStation title to date (and probably the company's last large-scale release for the format) is something aimed at this outrageously ravenous market.

Namco's accomplishments here are manifold, but *Ridge Racer Type 4*'s graphics are perhaps its strongest suit. The car models may be the stuff of fantasy (Namco having decided to shun real-world vehicles to avoid licensing hassles), but on the whole they're expertly designed, with convincing lines and, in the great Namco racing game tradition, lovingly rendered self-referential decals.

Crucially, the levels they're thrown around in are glorious, all eight showcasing Performance Analyzer-engineered environments whose quality is leagues apart from the popping, warping and generally tatty state that PlayStation owners have come to expect from their driving games. Superfluous touches abound, from tail-light tracers to helicopters, fireworks and other trackside animations. In strictly visual terms, if *Gran Turismo* uses around 75 per cent of the power of Sony's machine, then *Ridge Racer Type 4* must be sapping around 85 per cent. Forgive it some minor failings (for example, tail lights become visible through oncoming sections of road, oddly), and you'll appreciate this as one of the finest-looking PlayStation games ever.

In terms of gameplay content, Namco has left few avenues unexplored. The main mode of play is



Some of the bonus cars are rather daft, truth be told. This rocket car is perhaps more suited to a salt flat than a tarmac track, yet it handles quite well, bafflingly







Texture detail is rich, and best appreciated pre-race and during magnificent replays

Format: **PlayStation**

Publisher: **Namco**

Developer: **In-house**

Price: **¥5,800 (£30)**

Release: **Out now (Japan)**







Classy presentation is expected from Namco, but *Ridge Racer Type 4* really piles on the gloss. The speech may be cheesy, but that's part of the series' charm

Grand Prix, in which you choose between four racing teams and four manufacturers before tackling the eight tracks, earning new vehicles as progress is made throughout the season. Naturally, these extra cars can be used in sections outside of the GP mode, and saved to memory card.

Although the cars vary considerably in terms of style and power, they fit into two distinct categories Namco terms 'drift' and 'grip'. The former style offers handling in the original *Ridge Racer* mould: powering into a corner, tickling the brake, then ramming the accelerator back on sees you performing the most satisfying drifts imaginable (so long as each part of the manoeuvre is executed with care and balance – slapping into scenery is common as you pick up new, more powerful cars and push them to their limits). *Ridge Racer Type 4* plays to the developer's strengths in this respect – it doesn't attempt to take on *Gran Turismo* with heaps of realism, preferring instead to offer the kind of balls-on-the-table, pedal-to-the-floor action that *OutRun* pioneered and Namco has been refining for the last five years.

Yet having said that, the 'grip' cars make the driving experience altogether less outlandish (and, in some respects, awkwardly out of synch with series' lineage). It's never going to be a *TOCA*, but this more sure-footed of modes is an interesting diversion for Namco.

Whether 'drift' or 'grip', though, one factor remains constant: speed. Playing *Ridge Racer Type 4* can prove simply breathtaking. The design of each track influences the feeling of extreme velocity, but it's Namco's latest 3D engine which makes the action fizz: you'd be hard pushed to find another PlayStation game to match the intensity generated when blasting into one of *RR4*'s tunnels at over 300Km/h.

Special stages (accessible after completing the Grand Prix mode with different manufacturers), mirror and reverse modes, customisable cars, plus a workable splitscreen twoplayer mode round off a supremely professional package. For brazenly arcade-styled driving action, this has few peers.

It doesn't attempt to take on *Gran Turismo* with heaps of realism, preferring the kind of **pedal-to-the-floor action** that *OutRun* pioneered and **Namco has been refining** for the last five years



With its sharp turns, the harbour can prove acutely frustrating

Edge rating:

Eight out of ten

BLOOD 2: THE CHOSEN

Format: **PC**

Publisher: **GT Interactive**

Developer: **Monolith**

Price: **£40**

Release: **Out now**









The LithTech engine is capable of some stylish lighting effects, and the energy weapons such as this Tesla Cannon (above) push it to its limits







Two guns are always better than one: some – such as the Uzi (top) – can be used in tandem for extra devastation



The action is a frenzied affair and proves gratuitously gory as body parts tumble to the floor or are blown apart. But the flawed AI is disappointing

If you're aware of Monolith's first *Blood* game, try to forget it. *Blood 2* is as far removed from its primitive predecessor as it is possible to imagine. Whereas its progenitor relied on the ancient Build engine to display its wares in all their pixellated horror, this sequel opts for Monolith's proprietary LithTech technology. The result is a sophisticated, fluid, and extremely gory firstperson shooter that's sure to win many new friends.

Essentially a typical addition to the genre, with many standard ingredients in place (basic puzzle-solving, an extensive arsenal and ingame cut-scenes), *Blood 2* stands out by venturing one step further than many of its rivals. From character modelling to excellent level design and innovative power-ups, *Blood 2* oozes the kind of quality usually indicative of a long development period.

Amazingly, however, the game has been knocked out in just a year in an almost bug-free state, putting the dodgy state of Ritual's *Sin* and Microprose's *Klingon Honour Guard* to shame. Key to its success are the atmospheric environments – from sprawling outdoor cityscapes to claustrophobic industrial interiors – and the rich diversity of opponents that are matched in creativity only by the hugely entertaining selection of weapons at your disposal.

Over 20 instruments of destruction can be found, doubled-up and used with alternate modes of fire – making progress through the objective-based missions an 18-rated riot from bloody start to frenzied finish. The context-sensitive dialogue used in conjunction with the localised damage models is particularly welcome, resulting in a variety of grisly aural death throes depending on your victims' fate.

The one major criticism of *Blood 2* is that many of the enemies (from simple grunt soldiers to end-of-level bosses) display an abject lack of effective AI. Their unrealistic intelligence results in them 'seeing' you and subsequently attacking, regardless of their positioning, line-of-sight, or environmental considerations such as lighting or ambient sounds.

Since Valve produced the seminal *Half-Life*, features such as realistic AI are expected fundamentals, rather than hoped-for additions. And it's only against such exceptional competition that *Blood 2* begins to look second-best. It's a fine game in its own right – fast, funny, ultraviolent, and incredibly challenging – but suddenly the competition has become significantly more impressive.

Edge rating:

Seven out of ten

MOTO RACER 2

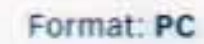
Format: **PC**

Publisher: **Electronic Arts**

Developer: **Delphine Studios**

Price: **£35**

Release: **Out now**





Other than better visuals and a few more options, *Moto Racer 2* is much like its ancestor. Thankfully, so is the replay mode



















Despite the addition of a simulation mode, *MR2* has retained its arcade roots and as such offers a wide variety of locations for you to test your off-road and on-track motorbike skill. Some are more plausible than others...

Having decided to forgo reviewing the below-average, rushed-for-Christmas and decidedly dodgy looking PlayStation version of *Moto Racer 2*, **Edge** was hoping the essence of *the* original would at least make the transition to the PC sequel. Thankfully, this is mostly the case.

Like its predecessor, *Moto Racer 2* lets you thrash street and off-road bikes around exotic locations of the globe. But this time there a couple more permutations. You can, should you wish, enter championships and concentrate solely on one of the two motorbike variants, as well as competing in a season mixing both, à la *Moto Racer*. There is a simulation mode in addition to the arcade action, which requires more emphasis on the braking areas and turn-in speeds as well as several other aspects that manifest themselves once you start making it around corners without ploughing straight into a wall.

Visually, once accelerated the graphics maintain the solid and pleasingly arcade-like appearance of the original, albeit displaying a better level of detail, naturally. So, whether in sand-strewn Sahara, humid Amazon jungle, rustic French countryside or suburban tarmac circuit, expect the scenery to be more distracting this time around. There's no shortage of courses, but should you desire a wider selection there's a user-friendly track editor, and while it doesn't enable the wildest of designs, you can still get plenty of enjoyment from a more conservative, restrained approach to circuit construction.

Spending time getting used to the track editor may be a wise investment as, other than the town circuits, second time around the tracks fail to evoke the same throttle-friendliness of the original. Somehow, some of the excitement and immediate playability of *Moto Racer* is noticeably missing. Also, your opponents' lack of advanced AI is occasionally responsible for many of the on-track accidents resulting in lost positions and an increase in blood pressure in all but the calmest of individuals.

Nearly two years after the original, things have moved on and *Moto Racer 2* does a commendable job in trying to keep up – it's good, solid fun for anyone looking for a two-wheeled arcade-style racer to grace their PC monitor.

Edge rating:

Seven out of ten

SOUTH PARK

Format: **Nintendo 64**

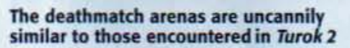
Publisher: **Acclaim**

Developer: **Iguana US**

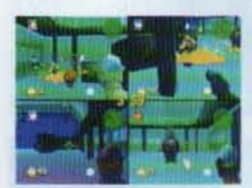
Price: **£40**

Release: **Out now**





The deathmatch arenas are uncannily similar to those encountered in *Turok* 2





Multiplayer deathmatches can be slow with four windows running, but the sound is excellent. Note the gratuitous use of the cow launcher in screens one and two (above)





Unfortunately, you have to wait until episode three before different types of enemy emerge



With the 'South Park' merchandising phenomenon at full tilt and generating the kind of revenue that the show's creators, Matt Parker and Trey Stone, surely only dreamed about, a videogame adaptation was inevitable. Equally inevitable was the fact that it would be unable to live up to the legend that is the cartoon series.

South Park is certainly far from being an utterly dismal game, but when you consider the story and characterisation inherent to the show's success, it clearly represents a missed opportunity. The game is presented as a series of six multilevel episodes, each of which consists almost entirely of wandering around a barren landscape throwing snowballs at a limited variety of creatures – generally one type per episode! turkeys in the first, cows in the second, aliens in the third, and so on. Increased numbers of little creatures are spawned by larger versions known as tanks, and the objective for most of the levels is to make it to the finish line by killing enough tanks to open a door further on. The linearity of the levels means rewards for exploration are even limited to the occasional power-up hidden behind an object.

Progressing through the oneplayer game quickly becomes a chore, but the reward at the end of each completed level is sufficient incentive to carry on. After reaching the finish line an extra character becomes available for the multiplayer mode, and the true 'South Park' devotee will want to collect all 20 of them simply to hear their many expletives. The amount of speech squeezed into the cartridge is perhaps the game's biggest selling point, and by far the most interesting thing about it. As well as the narratives during cut-scenes, each character has an abundant vocabulary of bleeped-out swear words.

That the game is based on the *Turok 2* engine is obvious, since all the weapons are fundamentally the same as the killing machines featured in its bigger brother. Even the cerebral bore makes an appearance, returning as a bizarre cow launcher. But *South Park* possesses none of *Turok 2*'s finesse. It's clear Iguana has had to code it in record time, and as such it may be a fine piece of 'South Park' merchandise but as a game it fails alarmingly.

Edge rating:

Four out of ten







Like the graphics engine, the weapons have also been 'borrowed' from *Turok 2*. The toilet plunger launcher (right) replaces Turok's standard bow

STAR WARS: ROGUE SQUADRON



A Speeder takes on a fleet of Tie Bombers in the Defection at Corellia mission







The object of this mission is to protect the supply convoy as it proceeds through a heavily defended valley. Sadly, it proves easier than it sounds

Format: **Nintendo 64/PC** (N64 version tested)

Publisher: **LucasArts**

Developer: **Factor 5**

Price: **£50**

Release: **Out now**







The quality of the game models comes at the expense of incidental background detail, leaving much of the landscape barren

It's a known fact that 'Star Wars' games have a more illustrious history as PC epics than as standard console fodder. While PC owners have been treated to games such as *X-Wing Vs Tie Fighter* and *Jedi Knight*, console gamers have had to make do with the likes of the middling SNES trilogy and the disappointing *Shadows of the Empire* on the N64. Sadly, *Rogue Squadron* doesn't make any great strides for the console treatment of 'Star Wars', although it is at least an improvement on *Shadows*.

Taking command of one of four craft – an X-Wing, a Y-Wing, an A-Wing or a Speeder – you must complete 15 missions in the role of Luke Skywalker and, at the end, his wingmate Wedge Antilles. That might not mean much to those who don't care for the films, but the inclusion of real 'Star Wars' characters is almost guaranteed to shift a few thousand extra copies.

The gameplay throughout is reminiscent of the Hoth battle stages from *Shadows*, right down to the way AT-ATs have to be brought down by winding cables around their legs. Each level has a number of mission objectives such as destroying an enemy installation, or protecting a soft target. The leisurely pace of the craft may leave you longing for something like *StarFox*, but it does mean that it's not too hard to hit many of the ground targets on the first pass. Completing the levels with a fast time and a high accuracy rating unlocks various secret vehicles, including the Millennium Falcon, and hidden missions and bonuses are scattered throughout the game.

With the addition of Nintendo's 4Mb expansion pack, *Rogue Squadron* runs smoothly at a crisp 640x480 resolution. Sadly, the game suffers from heavy fogging and a distinct lack of background detail, making much of the terrain look bland, although the various ship models are outstanding. The game's most impressive feature is its sound, which boasts a context-sensitive score and 3D effects.

Beneath such sheen, though, is an ultimately lightweight experience. LucasArts made a sound move in deciding to focus the action on one style (rather than spreading design talents too thinly over varied play types as in *Shadows*) yet it has failed to explore the potential therein. This is a fair title, but it hardly does justice to the subject matter.

Edge rating:

Five out of ten

EHRGEIZ

Format: **PlayStation**

Publisher: **Squaresoft**

Developer: **Dream Factory**

Price: **¥5,800 (£30)**

Release: **Out now (Japan)**









Complementing its conversion of the *Ehrgeiz* arcade machine, Dream Factory has included a series of amusing, briefly entertaining sub-games

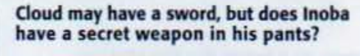








The stage to the left proves a difficult venue for projectile-oriented strategies. The Rooftop setting, however, is a happy hunting ground for snipers...



Cloud may have a sword, but does Inoba have a secret weapon in his pants?

Coin-op conversion *Ehrgeiz* is the most progressive fighting game for a worryingly long time. For a genre that can boast one true innovation in recent years – *Virtua Fighter 3*'s 'dodge' move – this collaboration between Japanese big-hitters Namco and Square represents an interesting alternative interpretation of beat 'em up mainstays. So, although truly 'new' features are scarce, *Ehrgeiz* reinterprets elements from a variety of sources to good effect.

Virtua Fighter 3 hints at the concept of interactive scenery, with different elevations and scenic features influencing combat. *Ehrgeiz* takes this simple premise one step further, by providing a collection of multi-levelled venues where a player may 'defend' a position. Its characters, as a consequence, appear almost deliberately designed to 'suit' certain stages. Those with a strong repertoire of projectile attacks benefit from the presence of a suitably lofty platform, while combatants such as *FFVII* star Cloud (in a curious cameo appearance) flourish in more 'open' environments. There's a genuine strategic undertone to each round.

The expansive arenas of *Ehrgeiz* are, naturally, unsuited to the accepted beat 'em up standard of two fighters approaching each other on a horizontal axis. Instead, by using D-pad or analogue stick, each individual direction causes a fighter to run accordingly – much like, for example, *Fighting Force*. But, as Core's title demonstrated, aligning a punch, kick or special move in 3D is an awkward, frustrating affair. *Ehrgeiz*'s solution, then, is as ingenious as it is oddly familiar. By holding either R button, you can 'lock' your fighter to an opponent, with directional controls becoming move in, move out and rotate. Nintendo employed just such a feature to smooth *Zelda: Ocarina of Time*'s combat.

Enjoyable as its solo mode may be, it's as a twoplayer game that *Ehrgeiz* shines. Given the license to roam and attack from any angle, at will, bouts between skilled individuals are both thoughtful and intense. With *Tekken 3* and its ilk, battles can become stilted, with each fighter appearing to take turns to execute convoluted combo sequences. Not so with *Ehrgeiz*. It lends itself to creative, individualistic play.

It's sad, then, that the enormous scope of the game's visionary blueprint isn't realised. Somehow, the selection of multi-levelled arenas don't appear to offer the tactical opportunities they initially promise, and its generic 'flat' stages are uniformly bland.

Furthermore, it's only the individual player's appreciation of 'Queensbury Rules' that, for example, will prevent frustrating button bashing victories in multiplayer bouts. Both criticisms – amongst other, minor, quibbles – serve to highlight *Ehrgeiz*'s role as introduction, rather than overture proper, for a promising new offshoot of an increasingly stale genre.

Edge rating:

Seven out of ten

AKUJI THE HEARTLESS



A range of traps face Akuji throughout his quest. Most are simple to avoid – Lara Croft-style grisly deaths are rare

Format: **PlayStation/PC** (PlayStation version tested)	
Publisher: **Eidos**	
Developer: **Crystal Dynamics**	
Price: **£40**	
Release: **Out now**	





Graphically, *Akuji* is attractive, offering a wealth of special effects and some visually distinctive levels, but its linear narrative and uninspiring, derivative puzzles fail to make much of a significant impact

If there is such a thing as a 'typical' PlayStation game nowadays, then *Akuji the Heartless* is just that. Destined to be compared unfavourably with its Crystal Dynamics stablemate *Soul Reaver* (previewed in **E**63), *Akuji*'s 'heartless' moniker takes on a new and unfortunate connotation when you realise its high production values are merely a veneer; behind the eye candy, it's a workmanlike and unadventurous effort.

Occupying a genre niche somewhere between *Tomb Raider* and *Zelda*, *Akuji* mixes elements of both. Its protagonist responds to control inputs more fluidly than the staccato-like progress of Lara Croft, yet appears clumsy in comparison to the wonderfully intuitive Link. Like both characters, Akuji occupies a world of switches and objects which you manipulate in order to progress further, but his quest to collect the souls of his ancestors is markedly less engaging. It could be a narrative issue, or a question of linear level construction, but it's hard to identify with or care about Akuji's adventure, or the locales he visits.



All too often the camera stays fixed in disobliging positions

Occasionally, though, there are moments when *Akuji the Heartless* offers a genuinely satisfying setpiece. One such moment can be found on the Khalas level, where, faced with an apparently impossible leap, you can use wall-mounted mirrors to judge the progress of an invisible moving platform. It's a fine idea, but executed in a cowardly fashion; why did Crystal Dynamics feel the need to *tell* the player about these mirrors at the start of the level? Why not let them solve it for themselves? In catering for the lowest common denominator, *Akuji the Heartless* becomes a series of mandatory tasks and easily pre-empted surprises.

The release of *Zelda: Ocarina of Time* has shifted gamers' expectations up several notches – and, judged by this yardstick, *Akuji the Heartless* doesn't deliver. Combat is lacklustre, requiring you only to align Akuji and hammer buttons; likewise, the game camera's penchant for languishing in awkward positions forces you to realign it manually far too often.

PlayStation owners denied the chance to experience *Zelda* might like to give *Akuji the Heartless* a once over; Miyamoto devotees will not. Roll on *Soul Reaver*.

Edge rating:

Five out of ten





Story progression is handled with a familiar mixture of FMV sequences and cut-scenes using the game's 3D engine

MAX POWER RACING

Format: **PlayStation**
Publisher: **Infogrames**
Developer: **Eutechnyx**
Price: **£40**
Release: **Out now**

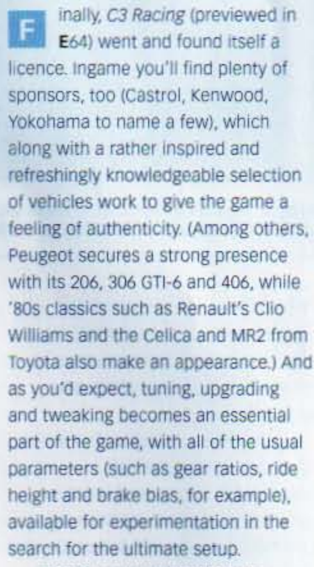



***MPR* offers arcade, championship, time trial and twoplayer modes**





The replay mode often offers dramatic angles of the on-track action, although its arcade-influenced style is unlikely to impress *Gran Turismo* devotees





While most of the vehicles are faithfully reproduced, a few seem slightly too angular

Finally, *C3 Racing* (previewed in **E**64) went and found itself a licence. Ingame you'll find plenty of sponsors, too (Castrol, Kenwood, Yokohama to name a few), which along with a rather inspired and refreshingly knowledgeable selection of vehicles work to give the game a feeling of authenticity. (Among others, Peugeot secures a strong presence with its 206, 306 GTI-6 and 406, while '80s classics such as Renault's Clio Williams and the Celica and MR2 from Toyota also make an appearance.) And as you'd expect, tuning, upgrading and tweaking becomes an essential part of the game, with all of the usual parameters (such as gear ratios, ride height and brake bias, for example), available for experimentation in the search for the ultimate setup.

The 30 tracks (which include reversed and night-time variants) are dispersed equally among ten international locations, from Africa to the US and Europe to Asia. While not revolutionary, their design is mostly agreeable, and when combined with their generous length, the result should prove a challenging prospect for any racing game devotee.

Technically, *Max Power Racing* continues what Eutechnyx had accomplished with *Total Drivin'*, the developer's previous PlayStation outing. You'll therefore find it hard to spot any pop-up as you throw your car around the varied courses, although you're likely to notice many capably implemented touches, such as waterfalls, smoking chimneys and aeroplanes as you do so.

This attention to detail is evident elsewhere, too, particularly in every one of the vehicles, which are each modelled according to their real counterpart and get dirtier as you powerslide your way out of dusty bends. Furthermore, the whole thing runs in the PlayStation's hi-res mode, but should you require a sharper image, a letterbox mode displays twice as many pixels in half the area, while a 16:9 ratio mode should keep owners of widescreen sets happy.

Yet, sadly, there is an overall rugged feel to the proceedings – the onscreen menus look unfinished (and hardly user-friendly), some of the collision detection is frightening, and the physics model could be more refined. The AI is occasionally disappointing, too, and by the way you can sometimes scream past them as they cruise along, you'd think your opponents are stuck in gear as soon as they hit a straight.

There's a fair amount of fun to be had with *MPR*, but a distinct lack of polish keeps this average racer in a different league to the PlayStation racing giants.

Edge rating:

Five out of ten




The game's physics model can sometimes prove a little suspect

SGI NT Box: Silicon Graphics gives new NT boxes a boost





Aside from obvious technical capabilities, this new kit is the sexiest yet from SGI

With subsidiary company Alias|Wavefront's 3D application software *Maya* firmly established on NT, 1999 finally gives the development community a chance to see what parent Silicon Graphics itself has been up to on the platform.

Originally announced in December '97, SGI's first NT box is currently in beta and being prepared for imminent release. However, the Silicon Graphics 320 and 540 are both a long way from simply being another re-badged, ultimately homogeneous NT box. While the company takes great pains to point out that the new machines comply with standard industry APIs, contain Intel processors, run NT 4.0 and that software developers will be able to make their applications run on the box right out of the chute (though optimisation will naturally speed things up), under the hood it's quite a different beast.

SGI has centralised all memory on the motherboard, dispensing with the PCI Bus architecture and its associated bottlenecks (though the bus has been retained peripherally for compatibility purposes) in one stroke. With all applications therefore utilising the central memory core, the company estimates that it has improved AGP memory bandwidth by six times, and I/O bandwidth by a factor of ten, quoting an impressive 3.2Gb/sec graphics memory bandwidth.

The downside of the new architecture is that the Cobalt Professional graphics chipset is locked into the motherboard, and thus is not as easily extensible as, say, a PCI graphics card.

Outstripping the competition

Despite this the company predicts that the performance leap it's making is big enough that the competition is not going to be able to catch up for some time. Certainly the demos of an alpha unit that **Edge** witnessed have seemed impressive enough, the 320 throwing uncompressed 601 video around at 1,920x1,200 with abandon while applying some interesting 3D DVEs in realtime.

These video capabilities are important; the company stresses that this is not just a 3D box. "If we look at things like the acquisition of SoftImage by Avid, and the Kinetix acquisition of Discreet Logic, what we're seeing is leaders in the editing/compositing market joining leaders in the 3D animation space," comments **Andrew Sheldon**, entertainment markets manager for Silicon Graphics. "They will spawn integrated solutions where an artist will sit down and do a little bit of everything. It's very important that the workstations supplying the engines for those artists are equally capable of doing 2D and 3D work."

The entry-level 320 specification runs from a single 350MHz PII CPU, up to a dual 450MHz machine, with RAM expandable from 128Mb to 1Gb. The 540, meanwhile, is based around the Intel PII Xeon processor – scaleable up to four CPUs to really make multithreaded applications fly – with RAM expandable up to 2Gb. Prices range from $4,000 or $6,000 for a base-level 320 or 540, up to $20,000-plus for a 540 with four CPUs. Sterling prices have yet to be set, but an SGI spokesman estimates that they will be pegged at less than one for one, with the 320 hopefully sliding in under the £3K barrier.

WorkStation

LucasArts is famed for its creativity and, as **Edge** discovered when it visited the US-based outfit, has perhaps the best-decorated working environments in the business. A tour of the busy desk of **Kathy Hsieh** (texture artist on forthcoming PC action adventure *Indiana Jones and The Infernal Machine*) revealed an accolade or two





Frankly rather naff-looking trophy "That's for my singing contest"

Artistic reference book "I was researching a key that Indy has to use in the game. This book has lots of examples from ancient civilisations"

Extra numeric keypad "I don't even really use this. I have a very weird keyboard in general. I don't know why the company gave it to me... perhaps they thought it fits my personality"

Gun "That was from a previous project. I simply needed to be able to draw the right kind of gun"

Odd-looking figure "It's my handmade Halloween costume (LucasFilm hosts a company party with some extravagantly constructed costumes), and the red rosette pinned to his ear says 'second prize', which I won from the hula-hoop competition at the company's annual July 4 picnic"

Selection of little toys "Some of them were presents and I stole the rest. Er, I mean they were freebies..."

'Indiana Jones' movie trilogy "It's totally for fun, not for reference"



The trials of a start-up developer: part six

After co-founding Lionhead Studios with Peter Molyneux, Demis Hassabis set up his own development house, Elixir Studios. After months of preparation, the team finally knuckles down to some coding

Let the games begin

"Judging from pictures in the press, you'd guess that most development teams have cool offices. You might have admired those pictures of Richard Garriott and his Origin team standing outside their hi-tech HQ somewhere on the sunny west coast of America. And you may well have marvelled at Jon Romero, with his palatial office at the top of the highest building in Dallas.

The reality can be quite different – or, in our case, very different. With just a week to find an office, we had to take what we could find, which happened to be a serviced office in not-so-sunny Cricklewood, North West London. The office is situated at the bottom end of the M1, at a junction shared with the A5 and the North Circular. Spaghetti junction, in other words.

We have no windows in our office and faulty air conditioning. The full horror of this situation was only revealed to us when Dave and Tim decided to tuck into a tasty breakfast of scrambled eggs. I pride myself on being democratic, but in this instance my principles went straight out of the, er, window. No more eggs in the office.

Monday July 7, the first day of Elixir Studios. What a fantastic buzz. No windows, no teabags, and school chairs to sit on, but who cares? Within two hours we were coding. After all the work I'd put in we were finally up and running. We could have been in someone's back room or attic and I still would have been thrilled. The atmosphere as everyone knuckled down was intoxicating.

Within days a familiar pattern had emerged. Hours of silence and hard work punctuated by outbursts of absurd conversation. At first I found this both cool and unsettling. Imagine a room where ten people worked in perfect silence for three hours and then suddenly it's bedlam as we attempt to solve the mysteries of life and the universe. Should Spock have been the captain of the Enterprise rather than Kirk? Is 'governing' someone more severe than 'learning' them? Keegan, Venison and Waddle: the worst footballers' haircuts ever?

Then, of course, there are the games. I know this sounds strange, but a lot of people in the industry don't actually play games. For us, however, it's the reason we're in it. In fact, we'll play anything. Cards, roleplaying games, Scissors, Paper, Stone, or fantasy football – we'll play any game given half a chance. I could rationalise this by claiming that it gives you a different insight into the mysteries of 'gameplay' (particularly multiplayer). But the reality probably has more to do with my burning desire to play and win something, anything.

Occasionally we take this too far. For instance, the office game of Diplomacy was ill advised. If you don't already know, Diplomacy is a classic board game that places the players as leaders of European countries in 1901. The mechanics and the combat system are as simple as you can get (ie, two armies beats one). The gameplay is in the relationship between the players themselves. By cajoling, bribing, threatening and lying, players try to stitch each other up. In other words, not the sort of thing you want to play with new business associates. Everyone got into the spirit of things pretty sharpish and soon enough, knives, boots and fists were all being employed as legitimate negotiating techniques. Unsurprisingly, things got a bit ugly and several reputations were tarnished. The board now languishes at the back of the office, stuck forlornly on spring 1908.

"Enthusiasm is everything. If you're not absolutely gagging to make your game, how can you expect someone else to pay you to do it?"

Meanwhile, work itself was intense. The programmers had got stuck into the Libraries (the basic building blocks of all programs) and few people were leaving the office before 10pm. On the back of E3, I was negotiating with four publishers. Key to this whole process were the game designs. Of the 15 that we had, we had settled on two. What I normally do is let an idea sit in my head for a couple of weeks so it can ferment. When I'm happy with the overall concept I'll talk it through with the others and see if they get excited about it. I had written up synopses for these, each about six pages long. That's more than enough space to get the main concept and features of the game across. They begin with an introduction to the gameplay with details of what you'd expect the player to be doing for the first five to ten minutes. Next there's a bullet-point guide to the plot, story and characters. The third section is a feature list of the game's cool technical aspects. We also included some conceptual art and descriptions of the overall graphical style.

There's no secret to selling these designs to publishers. Enthusiasm is everything. If you're not absolutely gagging to make your game, how can you expect someone else to pay you to do it? And that's fair enough, because what is it that drives people to sacrifice friends, weekends and sleep? It's the desire to create and play the game of your dreams."

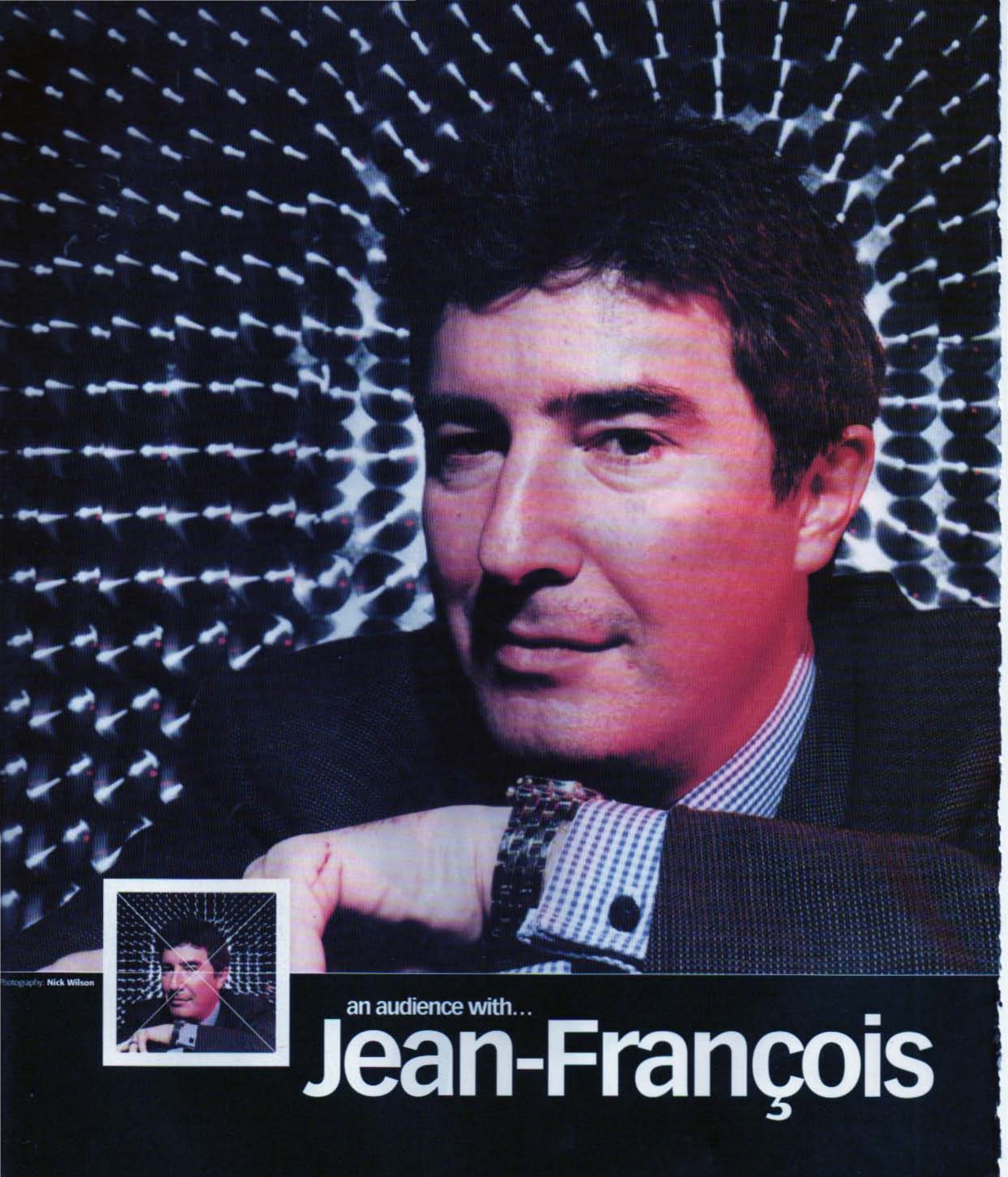


Studying the finer gameplay points of Scissors, Paper, Stone. They say a team that plays together stays together...



Edge moves

Programmers, artists, engineers, producers, animators, project managers – they're all essential to the industry, and they all read **Edge**. The following pages carry a phenomenal variety of jobs for graduates, professionals and any other interested parties who think they could make it in the videogame scene. Apply within...

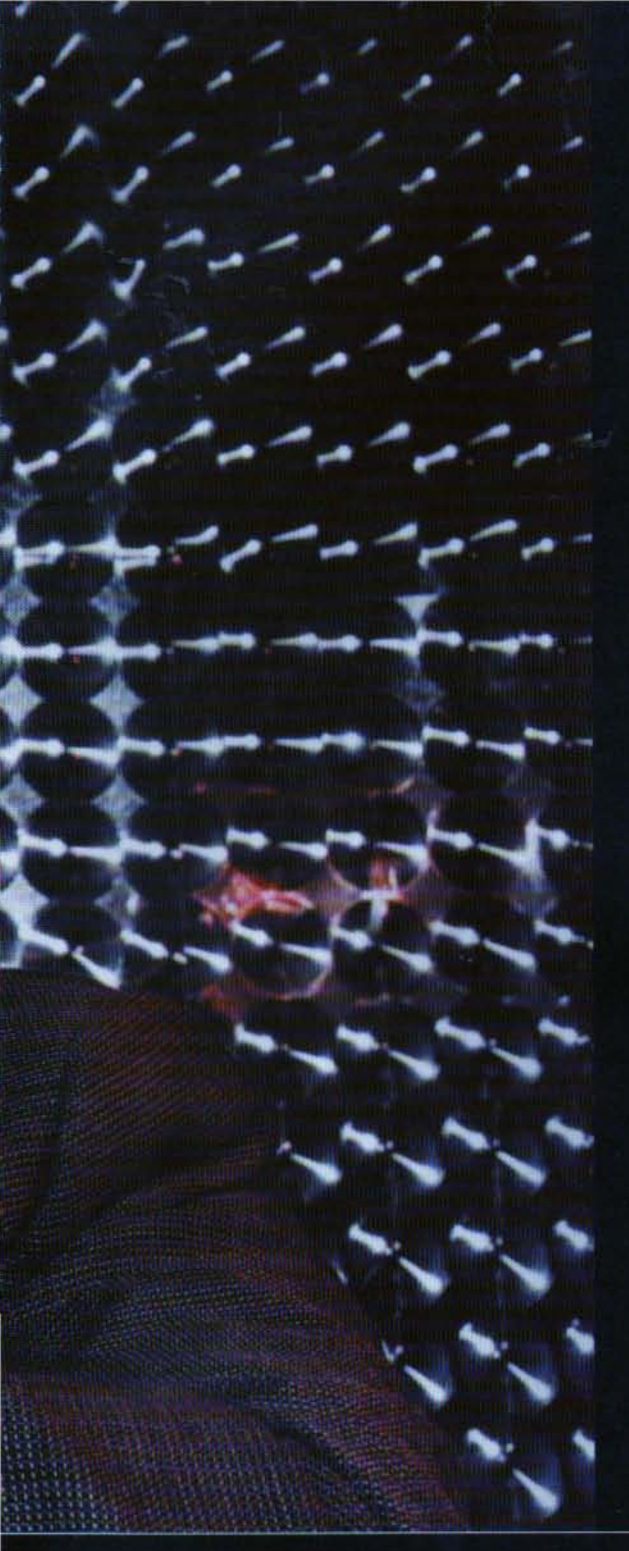


otography: Nick Wilson

an audience with...

Jean-François

Contrary to recent opinion, Sega is not dead. The company's logo has returned to the front of its Dreamcast console and a fresh face is set to take Sega back to the future



Cecillion

Over the last 12 months Sega of Europe has been quietly readying itself for a fresh attack on the European games market, guided by Kazutoshi Miyake. However, the time is fast drawing near for Sega to make a crucial and costly $100 million marketing assault on the territory and a new, 'local' CEO has been found to spearhead the attack.

Previously head of EMI UK and Ireland, **Jean-François Cecillion** is a thick-set Frenchman with a disarming ability to talk lucidly and candidly about his plans. Recruited by Sega Entertainment president Shoichiro Irimajiri, Cecillion's music industry background has imbued him with a fresh and unusual view of the videogame world, as **Edge** discovered when it met Cecillion at Sega's west London headquarters.

Edge: Sega has been on something of a rollercoaster ride in Europe over the last few years. What state have you found the company to be in?
Jean-François Cecillion: First of all I want to talk about the people here. Sega had hundreds of people in Europe five or six years ago when the company was performing very strongly in the marketplace. At that time people at Sega were thinking they were unbeatable, and I guess that's a human feeling that everybody has at least once in their life.

You can't blame them for that, it's just a fact of life. They were in such a dominant position that a lot of attitudes were distorted. Then, of course, the consequence of this is that when they launched Saturn, they thought, very rightly, that it would be a big success. Touch wood that won't happen to us, because we've learned from the past.

Saturn has shown the limits of what Sega could provide at the time – not in terms of technology, but in terms of understanding the technology and marketing the technology to the right people, with the right vision. Even though the technology was very good at the time, I think they thought they would make it because they were in a very dominant position. With a high market share they thought nothing wrong could happen to them – certainly not the disaster that they went through.

Today, when you look at the past, you can say there were issues about marketing, about content, about the number of games available, about the ability of the product for consumers, about the way the product is being explained to the consumers, and the relationship with the trade. It's my guess all that wasn't handled properly. If it *had* been handled properly, I wouldn't be here talking to you now, because there would be no need to change the team. So, what they did last year was to trim the company in Europe, and prepare the field for a new chief executive, which they did very, very well.

I can answer your question a bit more directly after this introduction – I want you to understand where I'm coming from, in the vision I have of the company, not just 'They're a bunch of great guys' or 'It was a nightmare', I want to try to understand the past and take the arrogance out of the place before releasing a new product.

People are very motivated at Sega, because they saw what it was like at the top and they tasted the bottom of the ranking, and they know exactly where they want to go back to, of course, to the top. And for that reason we have to give the people of Sega, of yesterday, of today and tomorrow, more reasons to believe that we are going back to the top.

Edge: Do you think that a big part of Sega's story now is learning from its past mistakes and moving on?
JFC: Everybody can make a mistake once. If you make it twice, it's not a mistake. So I guess we made a few mistakes once. If we see that we didn't have enough content, let's have more content. If the marketing wasn't strong enough, let's develop

stronger marketing. We didn't have a strong, pan-European structure and vision, so let's have one. We were maybe showing too much arrogance over our competitors, so let's respect the competition and admit that some companies did a very good job recently and we haven't. They are the mistakes of the past. We won't make them again.

Understanding what went wrong is among our responsibilities today, for the team and for myself, of course.

Edge: So where are you planning to take Sega Europe?

JFC: There's only one position you want to be, you know? So that's where I want to get back to – but I don't want to get there at any cost. Nothing justifies competition when it goes beyond certain limits. What I want to do is to play on the strengths of Dreamcast, to understand the product and then communicate our understanding, to educate the consumer as to why this product is a massive step forward. It doesn't mean the other products on the market are bad, it means this one opens up new areas. It's not just a game console, it's enhanced by other technical possibilities which will lead the consumer to have a different approach to the console itself. It's for gaming but also for online communication and gaming, so it's something else. It will open up some new marketing techniques, it will open us up to some new consumers.

Edge: Who are these potential 'new consumers'?

JFC: One of my worries when I arrived was our target audience, which was very strong but very limited. Because of the online capabilities of Dreamcast I would like to capture the female section of the population – which we haven't yet. I'd like to recapture the



"Let's admit that some companies did a very good job recently and we haven't. They are the mistakes of the past. We won't make them again"

"We can go into areas where we haven't been before. The young and female populations have not been reached"

young audience, the kids who are six, eight, ten years old – not just the 16-25 or the 25-34 groups which would lead to very predictable, unsurprising, anticipated marketing action.

I want people to think 'out of the box', to think 'out of the frame', or to design a frame which is six million times bigger than the previous one. And then within that big frame we can think laterally, and we can go into areas where we haven't been before.

The young and female populations have not been reached. And through online gaming, online communication and interactive activities you can reach those populations who might not want to go to Toys 'R' Us, or Comet, or HMV, or Dixons and buy a game. They might want to wait for people to think of them. So some marketing techniques will emerge from the capacities of the machine. That's how competitive I want to be – I don't want to say, 'Don't buy Sony, don't buy Nintendo'. If you want to buy two or all three of them, buy them, it doesn't bother me! You have to admit that there are some guys who did well where we did wrong.

Edge: Every new console in the past has sold successfully on its performance. Will Dreamcast be any different?

JFC: I don't take anything for a given, but there are some things that are more obvious than others. The obvious role of Dreamcast is that it's the most powerful games console the industry has ever seen. So when you say that, you're not taking a big risk by doing so, because you know the capacity, performance, speed, definitions – it *is* more advanced than any other console on the marketplace. That should attract enough software companies to work with us and give us the widest possible portfolio of content to support the sales of the machine. But I don't want to limit Sega to that, because this is something which is certainly very exciting and this is the core business and the core audience. The reason Dreamcast is going to take off is that this condition is fulfiled. It's a technically perfect machine. In ten years' time certainly, technically it will be a very unperfect machine, but today, compared to the consoles of the last five years, I think it's much more advanced.

Once that's said, you want to expand on that, you want to say, 'It's also a multimedia machine,' and explain what it is and take your time to explain it, to demonstrate to people what you mean. You can't just say, 'Guess what? It's great! You can use email and the Internet.' Who knows what that means, you know? So maybe the competition is not just in the games console area with Nintendo and Sony, it's also in the PC area, where we can offer access to Internet, email and online gaming for a much cheaper price. We have to be very careful how we sell this thing, because nothing is forever, and the competition will be fierce in that respect. But you have to play on your strengths and if you understand your product and its potential, then I guess by communicating this with the right marketing words to the right marketing audiences at the right time, you can fail, but you can't fail because of yourself. You will fail if the product is not good enough, if the market doesn't want it, if World War III breaks out, or if all our competitors come out with something better the same day. But hopefully all that won't happen! So, yes, I'm very optimistic.

Edge: Do you feel that the hardcore gamers are going to buy Dreamcast anyway, because it's so powerful?

JFC: I wouldn't say "anyway", but they already know about the performance, because those guys are very connected, they know about technology – some of them will have tried it already. The key, core guys – they know. I have nothing to teach them. They know 20 times more than I know, in that respect.

I guess at that stage core gamers will buy it for fun and to push themselves to the next available limit, and they will also buy it because in two years from now you will have, for example, a sports world championship online. Just like you have 100,000



"Dreamcast won't be just for the core audience, or for people who are surfing on the Net. It's the most modern and complete way of communication"

people running in the New York Marathon, you'll have 100,000 people playing online. You'll have a ranking, the top ten worldwide on a game, and the worldwide semi-finals, and you'll be able to watch how these guys play against each other. The screen will be a very user-friendly instrument in the home. It won't be just for the core audience, or for people who are surfing on the Net, or for people to send emails to each other. It's the most modern and complete way of communication – that's where I want to take Dreamcast. Again, it's with a lot of prudence and a lot of modesty as well, because it might not work...

Edge: So how are you addressing that – do you have a team working on the Internet functions at the moment?

JFC: Yeah, we do. Actually, it's amazing you say that, because I have my second network meeting today. So I'll know more in six hours! [Laughs]

Edge: Going back to wanting to capture the female audience, you'll be attempting to do something that the games industry has so far spectacularly failed to achieve. Do you feel the reason behind that is connected to the female perception of the games industry, or the way the industry addresses females?

JFC: It's a question of targets, and it's a question of what you can offer. You have a target and you offer the product to fit this potential. As long as you offer only beat 'em ups, shoot 'em ups and go-for-it games, you're likely to reach the 15-35 males. If you say to yourself, 'I can offer games without the shooting and beating,' if they're the right games, won't that get our female population to either go and buy games or play online?

I believe a lot of them will have time to play online – not because they're at home or do nothing, but just because it's easier for 32-year-old women to play at home on their own Dreamcast than to go to a shop and say 'Which game should I be buying here?' You have to offer appropriate products to the female segment, as you do for six- to nine-year-old children – they're not all going to take a gun and shoot at the screen. You can develop their feelings, you can develop their knowledge, you can develop their reactions with a game and with 'something else'.

So I will spend a lot of time concentrating on the content and will try to identify which products can be adapted to those segments of the market we haven't reached yet.

Edge: But does that mean you'll be ignoring the traditional gamers?

JFC: Once you have a killer game, of course you're going to sell one million or two million units, and you're going to say 'Great! That's perfect, that's all I need.' That's what I need for the existing market. But if you expand that to the rest of the population – to the ones who are likely to one day use a computer, use a screen, use Dreamcast – then you say to yourself, 'What do I offer these people? Only games, or something else as well?'

But then again, I've only been here three weeks so I'm, like, throwing ideas out to everybody, but the creative content, the diversification of our content in order to offer a wide, attractive and efficient portfolio of programs, is something that we're going to have to focus on.

Edge: And what reactions are you getting from the existing Sega staff?

JFC: Good. If you want to develop a company to a certain level, you just can't ignore 53 per cent of the population. You can't. There are products targeted at males, but females use the same product at home.

Edge: Does it seem strange to you coming from one side of the entertainment industry to another and finding that it's almost exclusively targeted at males?

JFC: I guess that's because it's such a young industry that's developed very quickly. This industry has real potential. The industry is growing by double digits – serious, solid double digits – worldwide, year on year, which is great news. It's great to be in an industry growing at 20 to 30 per cent a year – and it's not finished. It's fascinating to see that more and more big 'names', whether they are producers, directors or actors are getting involved in this game business.

It's also fascinating to see that this industry is going to have to restructure itself in order to grow even faster. For all these reasons I'm not surprised to see that it's focused on males, because that's the step you have to take before you expand. You can't launch an industry in entertainment and target everybody, because then you'll surely go to the wall. When your marketing and the way you reach your audience is sophisticated enough, then you can expand. I guess I happened to arrive at that moment in time.

Edge: Don't you think that it's also a case of a male-dominated industry started by men now only making products that appeal to men?

JFC: Yeah, but every industry grows around certain people, and what strikes me is that it's always creativity that matters most in the end. I'm



pleased to have joined this industry for that very reason, because the creative side is very important.

Edge: So the creative side really drew you to Sega?

JFC: And Dreamcast! To be responsible for launching Dreamcast in Europe is a once-in-a-lifetime opportunity – I think it's such a brilliant product. Dreamcast is a gift. The creative content is a passion. Two different things.

Edge: What do you think your experience in the music industry enables you to bring to the games industry?

JFC: It's not what I can bring to the games industry – what I can bring to Sega is a lot of drive, a lot of passion, a certain vision of where this company can go. And to make people happy to work for Sega, happy to work for a company which is going the right way, because the hardware and the software is going the right way. It will be extremely difficult, but motivation is something I will bring in because I'm definitely a positive person, very driven – if you're not driven, you just fall at the first obstacle, you collapse and you'll never come back.

The second thing I can bring is my knowledge of the creative world. I would compare developers to artists, basically – they are the people who really matter to me, whether they are in-house, or thirdparties, or whoever. Those people have to be – I won't say managed – but they have to be dealt with in a certain way. I think it's important that this creative world knows that I'm very sensitive to what they're doing. You don't look at the consumer and say 'What does the consumer want?' The consumer has no idea what he wants! You give them something outstanding and they all jump on it. You need to understand your market and you also need to nurture the creative talents out there. They can come with the most outstanding game or concept and someone will have to back them up and say, 'I believe in this one,' like I believed in some of the artists I signed – against all odds. I said, 'I believe in this, we're going to do that, we're going to make it happen, whatever it takes.' And sometimes you do that, not every five minutes, but once or twice when you really believe in something.

Edge: One of the biggest challenges you're going to face is the successor to the PlayStation, which is destined to be a superior machine to Dreamcast. Is that something that concerns you?

JFC: No. I only worry about what I know. I don't know what Sony's going to do, but I guess it's going to be very good. When I know the characteristics of the machine and its potential, then I'll worry. That's life, that's competition. We'll do a better one the next time around...

Edge: Where do you want Dreamcast to be positioned in the marketplace?

JFC: That's a very good question – this is the $100 million question. If you have any ideas, let me know! I'm actually picking brains everywhere in Europe on that issue. I hope it's going to be a creative and risk-taking position. I'm asking all the marketing geniuses of Sega to work hard on this one at the moment. I hope the positioning will be interesting, and an opportunity for us to demonstrate other sides of marketing, to be creative and to open new doors.

Edge: Do you think Sega has learned a lot from Sony's skill in marketing the PlayStation?

JFC: Again, I don't want to position Sega against Sony or learn from Sony or whatever, because a good product, by definition, is a one-off. Therefore, the communication of a good product is a one-off as well. You can learn from mistakes but you can't repeat the good things because it would be too easy, so you have to re-invent the good points of a product and then you have to re-invent all the marketing going with it. I don't want to ignore what Sony did – from where I stand they did a very good job in the way they communicated PlayStation, especially over the last two years.

Dreamcast is a unique proposition on the marketplace, which is in between games consoles and PCs. I don't want to do whatever Sony did to grab the 25-35 age group. Whatever they did, they did it very well – thank you very much, turn the page! Now, what am I going to do with Dreamcast? I'm not going to be influenced by what Sony did by any means – except that I want to match their success!

Edge: If the online aspect of Dreamcast is as important to you as you claim, what are you going to do about the modem in Europe. Will it be bundled with the console or not?

JFC: We're debating it. Yes, of course, the modem is very important to Sega, so there is a way of positioning the modem which we have to consider.

Edge: But surely if the machine is in one pack at launch and the modem is in another, then consumers won't perceive it to be an integral part of the Dreamcast setup...

JFC: That's all about the positioning, that's why I want to take my time with it, to really make sure that I'm going to reach the right proposition. And I won't change my mind two weeks before the launch – it can happen, but I'd like to have a clear proposition well in advance and start the educational process and the pre-release campaign.

The modem is not a marketing tool which you use for the first two or three months and then you hope will stick. You don't just throw this stuff out, you have to look at the long term, you have to look at every opportunity or threat. And only when you have a picture of the future – not a three-month picture but a three-year picture – then you make your decision. It's complex, but very challenging.

Edge: In a recent interview, Giles Thomas [Sega's European marketing manager] stated he wasn't interested in Sega as a brand, only Dreamcast. Is that the message you'll be pushing over the coming months?

JFC: I understand what he means, but I wouldn't formulate it like that. I'm interested in everything – Sega and Dreamcast – but we have different ways of communicating the two.

What I want is for people to know that Dreamcast is from Sega, because if Dreamcast is a big success I want Sega, the parent company, to take profit from that and not just to be ignored as a corporate bunch of guys somewhere in Tokyo, London or San Francisco. It's the difference between product PR and corporate PR, maybe. I don't want to be so strict in the split between the two of them because I will want to use the Dreamcast opportunity to restore Sega's credibility and image. I'm interested in Dreamcast's success and I'm equally interested in Sega's credibility in the marketplace. For me, it's equally important. E

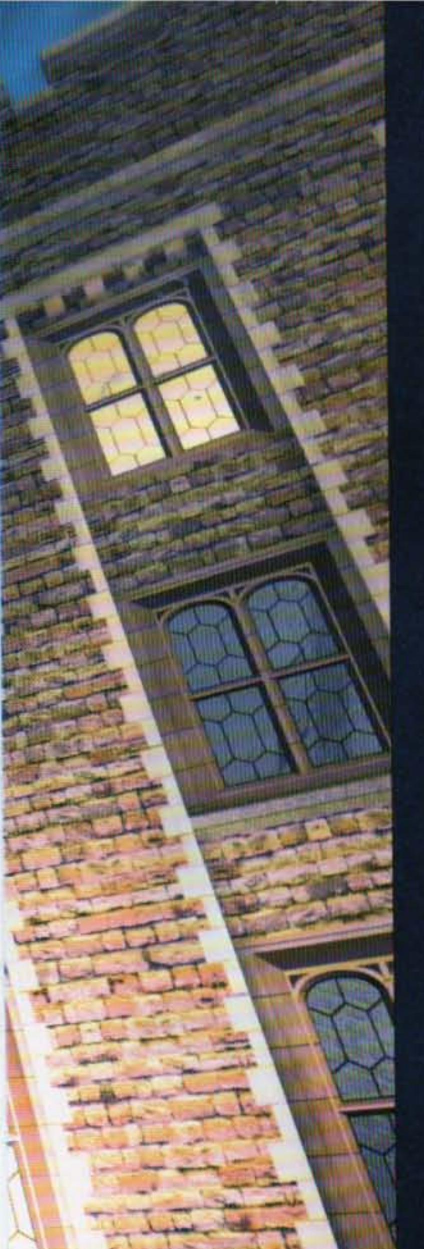
"I would compare developers to artists, basically. They are the people who really matter to me, whether they are in-house, or thirdparties, or whoever"

Gallery

The art of the videogame











Renowned for elaborate and successful flight sims such as *F-22 Air Dominance Fighter* and *Total Air War*, *Wargasm* is something of a break from tradition for DID.

These relatively static, subtly lit images are somewhat at odds with the game's content, which realises new potential in action-heavy wargaming. They remain hugely evocative, nevertheless.

Images rendered by **Donna Jennett** using *3D Studio Max*



Based just 350 miles south of the Arctic Circle, Daydream Software has chosen London, England as the setting for *Traitor's Gate*, a PC game that sees you playing an American agent charged with the task of foiling a robbery of the Crown Jewels. The images were created from photos taken on a trip to the city and try to reproduce locations such as the Tower of London (seen here) accurately.

Daydream claims that the Tower Authorities requested aspects of the Tower's vault system to be changed after seeing how realistic previous title *Safecracker* proved to be...

Images rendered using *Alias|Wavefront* on Silicon Graphics workstations by **Leif Holm**, **Frederik Jonsson**, **Ulf Larsson**, **Michael Nahal** and **Nigel Papworth**

MAGICAL TRUCK ADVENTURE

MINECART MADNESS ABOUNDS IN AM3'S NEW ON-RAILS, OFFBEAT CREATION

Developer: AM3
Release: Out now (Japan)
Origin: Japan





Visuals typify the graphical superiority of the Model 3 board over its contemporaries, with rich colours and distant horizons. Looks fun, too



No, it's not *Ocean Hunter*. Quite how the cart has found its way underwater is something of a mystery. Until there's an opportunity to play the game, of course





Dinosaurs and dragons? Rather more enlivening than the grim reality of a trip on British Rail...

Developed by the same team responsible for Sega's spectacular lightgun shooter *The Lost World*, *Magical Truck Adventure* is similarly designed to lure women and couples into coin-op centres, in a bid to broaden their appeal in the face of competition from home consoles. And with colourful, fantastical visuals (produced by the Model 3 Step 2.1 board) and a strikingly novel physical interface, AM3's new title may well hit its chosen target.

Although a oneplayer game of *MTA* is possible, it's really the couples who will benefit most from the experience on offer here. You control the game via matching, hand-operated rail carts, pumping the lever up and down to achieve forward motion. As with Taito's off-beat railway simulator *Densha Da Go!* this coin-op is truly 'on-rails', with the carts guided along virtual tracks past various events. A pair of footpedals enable you to tip the cart up onto either side to avoid obstacles, while stamping on both will force an all-wheels jump. Whether watching *MTA* being played matches the hilarity of Namco's *Final Furlong* literally remains to be seen.

Progress through each game is made by selecting only three of the six available stages, to increase the appeal for successful players by giving them incentive to attempt different routes. The next level selection is made at the end of each stage, an either/or choice as in the classic *OutRun*, while a 'mystery stone' can be passed between players in order to decide which cart will lead the way. However, as with *Lost World*, *Magical Truck Adventure* attempts to encourage partners to cooperate, with a percentage score for how well you've pulled together. It appears that Sega has delivered a refreshingly alternative title for early 1999.





Using a pair of footpedals you can tip the cart – the only way to avoid collisions

TENKOMORI SHOOTING

MORE TRICKY TARGET PRACTICE FROM NAMCO

Developer: Namco
Release: Spring (Japan)
Origin: Japan

Very much in the tradition of the frenetic coin-op hit *Gun Bullet*, produced from the same stable, Namco's *Tenkomori Shooting* consists of 25 similarly themed shoot 'em up mini-games. Featuring detailed sprite-based graphics, the various stages offer simple pleasures such as blowing away cockroaches, picking off crows, blasting UFOs (with rockets) and shooting cells to separate them.

As in *GunBullett*, a basic objective is set at the commencement of each game – hit 16 tanks, 20 crows, etc – and failure to succeed, as ever, loses a life. As with many recent coin-op titles, the emphasis is on attracting the 'light user' into arcades, rather than offering any meaningful gameplay experience. A PlayStation version is imminent, then.





The enviable Japanese talent for giving life to all ideas cute and crazy is exercised once again in *Tenkomori Shooting*. Few could deny the appeal of *GunBullet* – this looks to Edge like similar fare...







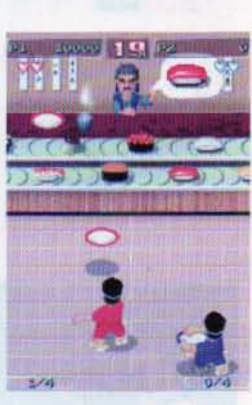




Several of Namco's past arcade hits are thought to be the inspiration for some of *Tenkomori's* level designs, from *1942* to *Xevious*. A muted return for the scrolling shoot 'em up, it would seem







LA MACHINEGUNS

SEGA WHEELS OUT THE BIG GUNS AS GUN BLADE RETURNS

Developer: AM3
Release: Out now (Japan)
Origin: Japan





A revamped AI system promises that every game will be unique to a certain extent, with new enemies appearing from random positions

Another product of Sega's prolific AM3 division, *LA Machineguns* is the sequel to 1997's low-profile shooting game *Gun Blade*. This time around your heavy-calibre weaponry is attached to a futuristic assault vehicle rather than a helicopter, and the action is cast forward to the year 2025. As a member of the counter-terrorist group SIFAT, you must defend the west coast of America against the Rage of Machines (ROM) – android militia that has invaded Los Angeles. But while that sounds like nothing new (simply shoot the bad guys), *LA Machineguns* does have a couple of interesting tricks up its proverbial sleeve.

Rather than forcing you to blast through a succession of increasingly difficult stages, AM3 has made four of *LA Machineguns'* five areas immediately available. Whether that will result in an ultimately less challenging experience will only be determined through extensive play. However, given the locations





After the innovations of *Time Crisis II*, the pressure is on Sega to respond

selected, and that the title uses the latest spec Model 3 hardware, it's little wonder that the developer wanted to show off its game. In addition to LA, you can mow down the enemy in Las Vegas, Alcatraz and an underground Yosemite base, before visiting the Valley of Death for the final showdown. Finally, the revamped AI system randomises the appearance of targets, so that no two successive games are identical – unlike coin-op shoot 'em ups themselves, unfortunately.

JOJO'S VENTURE

CAN CAPCOM'S MANGA-INFLUENCED BEAT 'EM UP OFFER ANYTHING NEW?

Developer: Capcom
Release: TBC
Origin: Japan

After producing a chain of increasingly refined yet ever less original fighting titles, including the *Street Fighter Vs* series, Capcom is seemingly undergoing a conceptual renaissance. With the open-plan 3D beat 'em up *Power Stone* on trial in Japanese arcades and on a direct course for Dreamcast (February 25 if all goes to plan), *Jojo's Venture* uses the 2D CPS-III board to deliver an innovation of its own.

Themed around Hirohiko Araki's popular Japanese manga series named *Jojo's Bizarre Adventure*, Capcom's coin-op uses both characters from the cartoon and one of its concepts. Dubbed STAND, the system is a particular inner-force which players can call upon. The aim of the STAND technique is to make classic beat 'em up combination attacks easier to perform, while more experienced fighters can pre-program moves to use in combat. Equally, the STAND force can be set into motion independently, leaving the original character free to move separately. Ten protagonists from the manga series have been drafted in to star in Capcom's game, all faithfully recreated as high-quality CPS-III sprites.

While the STAND system may appear complex, in practice its operation is simple. Like other coin-op manufacturers, Capcom has realised that consoles are drawing away its audience. *Jojo's Venture* is an innovative attempt to drag them back.



As with all CPS-III games, the standard of the sprites is sumptuous – rich in both colour and detail







With *Power Stone* and *Jojo's Venture*, Capcom is seeking to refresh the tired fighting game market before punters start looking elsewhere



Sonic the Hedgehog

Sega's prickly progeny singlehandedly consolidated the success of the Mega Drive in the west. By delighting gamers with his speed and personality, Sonic achieved superstar status almost overnight





Necessity is the mother of invention. And, perhaps, *Sonic the Hedgehog*. It's no secret that, prior to the launch of the Mega Drive, Sega executives were desperate for 'their' Mario. They needed a mascot, an icon; a figure to become synonymous with the Mega Drive, and gaming per se.

Having charged their development teams with the task of suggesting a suitable 'star', various Sega divisions formulated a number of designs and concepts. Ranging from the eminently workable to the decidedly risible (should the afterlife exist, the blasphemy committed upon the animal kingdom by games designers and cartoonists alike guarantees an unfriendly reception), one figure caught the eye of Sega's decision makers.

Sonic's inaugural adventure was, in many respects, the antithesis of its rival, *Super Mario World*. Both, as platform games, sang from similar hymn sheets, yet *Sonic* preached a far more beguiling gospel to the casual gamer. Fast, bright and more cartoon-like in appearance than its Nintendo counterpart, *Sonic the Hedgehog* made (to the eyes of the uninitiated) *Super Mario World* appear 8bit and pedestrian.



Critical opinion of Sonic's first outing was, at the time, universally positive. Retroactively considered, though, it's remarkable just how polished *Sonic the Hedgehog* was. Despite its derivative remit, it also contributed many features-for-hire to a genre stale through years of second-rate *Mario World* pastiches.

Despite his failure – to date – in capturing the imagination of Sega's 'home' market, Sonic remains an enduring figure in the west, where his spin-off cartoon series still airs on television. It remains to be seen whether or not his Dreamcast appearance (see p70) can lead to a full-scale renaissance in the west, but early signs suggest that Japanese gamers – the hardcore sector setting the pace, naturally – are now warming to him in 3D.





Characterisation is an aspect of game creation that continues to confuse and befuddle otherwise talented designers. *Sonic the Hedgehog* demonstrates how, with strong definition and a handful of gimmicks, a fundamentally rather limited brief for a mascot can become synonymous with a console, and its success

Publisher: Sega	1990	Developer: Sonic Team	Mega Drive



Sony PFM 500A 42-inch Widescreen Plasma Monitor

£8,170 approx Contact: 01932 816340

With DVD providing the ultimate in picture quality and Dolby Digital amps and speakers kicking out the soundtrack, it's only usually the television screen that lets home cinema down. And as the technology for watching movies in the comfort of your house surpasses even the local multiplex, you really should be thinking about getting your hands on Sony's 500A1W 42-inch Widescreen Plasma Monitor.

Minimalist in both its black-and-grey livery and simple design, the gorgeous, if pricey, display is a dream to use. Sony has chosen not to include a built-in TV tuner, but all you have to do is plug the screen into a VCR to watch the box. Other than that, the monitor comes with a vast selection of sockets making it possible to connect up everything from your Dreamcast to a DVD player. At a flick of a switch you can watch movies in either 16:9 or 4:3 ratios and Automatic Gain Control makes the best of any signal.

Unfortunately, while the image definition is spot-on, the picture at times looks washed out, and once you've mucked about to get the colour and brightness right for your gaming needs, the settings will be all over the place when you try to watch a movie.



Pioneer Performance CDJ Range

Contact: 01753 789500

Mixing your own tunes at home can be a real drain on your bank balance. Until, that is, Pioneer released a budget-priced range of its DJ equipment. Comprising of the CDJ-500S player, DJM-500 mixer and the EFX-500 effect box, the system doesn't fare too badly when compared to other Pioneer kits which will cost you roughly twice the price.

The player may lack a loop facility, but thankfully features the crucial pitch control and timeshift function. The mixer is also above average, with three-way rotary EQ/kills enabling you to remove entire channels from a track, although only having four inputs means that you won't be able to connect samplers or keyboards – an annoying limitation. Best of all, the EFX-500 sound box can add up to ten effects to your mixes without the need to fork out thousands of pounds on multiple FX decks.

The system maybe a little too basic for the serious DJ, but for aspiring Pete Tongs, it could be a solid first step to a promising career.





New government regulations mean that manufacturers are no longer obliged to provide recommended retail prices on certain consumer electronics products.



Canon MV10 MiniDV Camcorder

Contact: 0800 616417

As a whole host of dinky, user-friendly camcorders flood the market, manufacturers are using more and more gimmicks to hook potential buyers. Most are a waste of time, but in the case of the Canon MV10 MiniDV, they improve your home movies no end.

To combat the annoying camera shake inherent in most palmheld camcorders, Canon has developed a new optical system that's a vast improvement on the digital correction devices of a few years ago. If your hand wobbles while shooting, a built-in shake detector picks up on the movement and shifts a group of lenses, redirecting the path of light before it hits the CCD. Your picture remains steady, even if your hand does not.

Partnered with this fantastic feature is the usual crop of special effects, and some handy modes for capturing images in low light or compensating for the reflections of sand and snow. The only problem? The optical stabiliser at times knocks out the auto focus while using the 64x digital zoom, but face it, when you get this close to a subject you should be using a tripod anyway.



Pioneer PDR-555RW CD Recorder

Contact: 01753 789500

Just as it's set to be replaced by superior DVD technology, the good old compact disc has got its act together as high-quality and, most importantly, reasonably priced CD recorders have come to market.

Pioneer's PDR-555RW CD is a particularly fine example of this new quality, recording to both CD-R and CD-RW discs. Simplicity itself to use – simply press record to start and pause every time you want to start a new track – the recorder either lets you work from a digital source, such as a master CD, or best of all, allows you to transfer your old analogue LPs to digital heaven. Okay, the old scratches and jumps of the original vinyl will still be there, but at least you'll know that the quality isn't going to get any worse every time you play your newly mastered disc.

Playback is adequate, but you're probably better off using your usual CD player to hear the results, unless, of course, your deck is more than a year old – as most existing players can't handle the RW discs.







Coldcut VJamm's it in

UK: Ever since they burst out of nowhere and totally revamped the dance music scene, Coldcut have shown they have both ears and eyes for the latest trends. Credited with 'inventing' sampling and remixing with their seminal 'Say Kids, What Time Is It?' and Eric B & Rakim's 'Paid In Full' tracks, they always push the limits. It was only going to be a matter of time before the synergy of their art-school attitude and cutting-edge computer abilities resulted in some neat interactive toys.

So following on from 'Let Us Play', the duo's first interactive CD-ROM, Coldcut decided to remix its technology as well as its beats. Small wonder, then, that their latest project, 'Let Us Replay', sees the band dipping its toes in the waters of bona fide software releases. Disc one is a collection of new and live tracks plus a whole bunch of weird remixes, with Japan's ubercool kid Cornelius ranking highest. More interesting, though, is the bundled demo version of *VJamm*, a video-mixing tool to be released properly in March on Coldcut's own Ninja Tune label.

Best described by its piano interface as a tool for playing around with vision and sound, *VJamm* grew out of Coldcut's live audiovisual experiences, most recently at Glastonbury and the Montreux Jazz Festival. Sixteen video clips can be simultaneously loaded and played, looped and mixed either straight off the PC keyboard or, for more serious musos, triggered by MIDI inputs. Preloaded clips include samples of Coldcut's 'Atomic Moog', 'Timber' and 'More Beats and Pieces' videos. Alternatively you can sample TV, film or home video to build up your own visual library. Somehow they've even managed to develop a video-scratching option, too. Whether it makes *VJamm* as much fun as a pile of vinyl and a set of decks is another matter.



Ever chiselling away at the boundaries of dance music, Coldcut has scored again with latest creation, *VJamm*

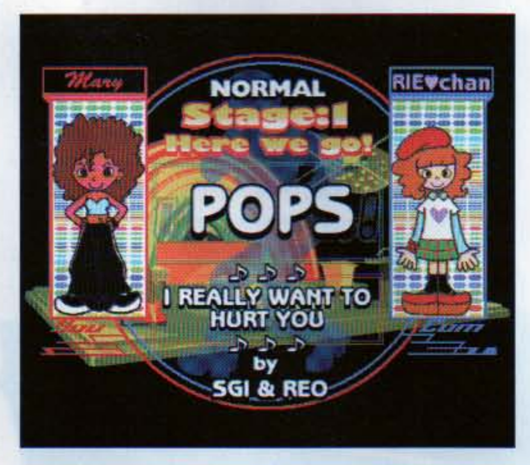




Top of the pops

Japan: The national obsession with bizarre music-driven games is about to get even more juvenile thanks to the dual PlayStation and Dreamcast release of *Pop 'n' Music*. Part of Konami's *Beat-Mania* series that's been ruling the coin-op hit parade for the past 12 months, *Pop 'n' Music* is designed to hook the market which in the UK is prime hunting ground for the likes of the Spice Girls and Steps. The superior taste of Japanese tots, however, sees them grooving to slices of Tokyo reggae and soul.

With these pint-sized players in mind, *Beat-Mania*'s characters have been given the once-over, gaining a cutesy, manga look. The kids are instructed in *Parappa the Rapper*-style by a little guy called Pop before being confused by his wicked alter-ego Ojama. The stripped-down arcade controller is also provided as a dedicated nine-button handset designed for the tiny fingers of old-school Playsta devotees. **Edge** can't help wishing that the genre would take off in the UK, if only to laugh at the wooden moves of the inevitable Back Street Boys version.







All in the wrist action: *Pop 'n' Music* prepares its teen-beat assault





Party on: Doom's fifth birthday

UK: It's hard to believe that *Doom* is already a respectable five years old. If it were a dog it would be pushing 30 by now. But a long time has passed since the original shareware version of the game was uploaded to the University of Wisconsin, and a good few things have changed. Most noticeably, the firstperson shooter has become a genre of its own rather than a subset of the shoot 'em up, and it's all thanks to *Doom*.

To celebrate the birthday of one of the most groundbreaking games ever, **Edge**'s sister mag, *PC Format*, threw a party for its creators in Dallas. Despite talk of id Software bust-ups and feuds, the night saw all those old faces sitting round the same table like the best of friends. John Carmack, Jon Romero, Jay Wilbur and American McGee were among the revellers (cramming the restaurant car park with high-performance sportscars), in a salute to a game that not only redefined gaming, but also managed to appear on just about every major home system. Oh, and the Jaguar.

The invitation was also open to the rest of the Dallas development community, and as the evening progressed, the venue filled with the cream of Dallas' creative talent, as guests from Ion Storm, GoD and Ritual Entertainment arrived. While the evening was a success, though, only one guest managed anything harder than a Pepsi. Party on, dudes, indeed…



The original team at the *Doom* day bash, from left: Jay Wilbur, Jon Romero, American McGee and Tom Hall

Drunk on Abe's tears

UK: Following his recent starry step up into the world of Hollywood (see **E**65), Abe continues his exodus out of Oddworld with the introduction of SoulStorm Brew into the real world. Of course, whether he would approve of Oddworld Inhabitants' licensing of the infamous addictive liquid of SoulStorm Brewery is a moot point – it's the reason that the Mudokon people are enslaved to mine the graves of their ancestors in the first place.

And after actually tasting the dark foamy liquid ('part bones, part tears, bottle-conditioned real ale') **Edge** is confused as to why anyone would be the least bit interested in the concoction. Assuming it's the only thing they get to drink, it would explain why the Glukkons are so angry…



All that's needed is Mudokan pizza and the picture will be complete

Playing Fields achieves multiple Wargasm



UK: *Wargasm* publisher Infogrames recently barnstormed The Playing Fields in London to promote the potential of the game's extensive 16-player link-up capabilities.

Over 100 conflict-hungry participants turned up to celebrate the occasion – some even donning authentic (read 'stinky') military apparel in order to crank the atmosphere up to the max.

And what were the prizes on offer to such eager combatants? Heck, the three overall winners walked off with Microsoft Force-Feedback joysticks.

War – what is it good for? Well, make your own mind up.

The beauty of multiplayer *Wargasm* in full effect. (Helmet optional)





Dinner for two

Japan: Enigmatic Japanese developer Kenji Eno (head of Warp) reconfirmed his artistic and oblique take on things with this unusual Christmas present. Delivered to a large number of those who attended the 'D2 for Dreamcast' announcement on May 22, 1998, Eno-san's gift was a food package, presumably aimed at clearing up the acne of some of the more sickly otaku. Featured on the packaging is *D2*'s heroine Laura (top), while Eno himself makes an appearance on the back, cooking up a pot of the tasty vittles.

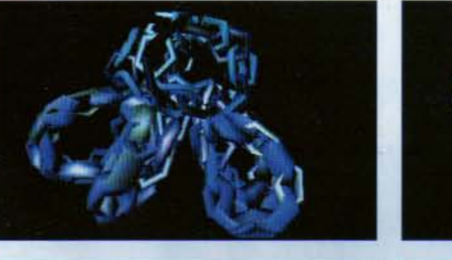




Survival of the grooviest

UK: Such is the current obsession with artificial life (see p60) that it's a wonder anyone is still interested in carbon-based life. But for the clubbing fraternity, at least, one use of A-life looks certain to improve flesh-and-blood existence. PC-based *Dancer DNA* brings a new level of sophistication to the growing interaction between the visual and musical aspects of club culture. Part *Creatures 2* fused with a 3D animation package that reacts to music in realtime, the objective is to hone the gene pool to cultivate weird-looking beasts that can be set morphing to anything from classical to drum'n'bass. The abstractions thrown out by the program have already been wowing venues such as London's Blue Note and The End. They have also seen action with dancefloor innovators The Orb.

Starting with 15 separate population groups, each with 12 basic forms, budding visual surgeons can cut and paste and mutate this gene pool to create millions of possible variations. The genetic information of each creature doesn't just determine its physical attributes, though – it's the key to its sonic interaction, too. Like their human counterparts, some populations are more inclined towards banging speed garage, while others prefer ambient trance. Once complete, the 3D animations can then be sent dancing through their genespace, powered by whatever audio input you fancy. Of course, a night out with most of the resulting mutants would send your average E-head into the depths of drugged-out paranoia. Only constant genetic tinkering and experimenting with a stack of CDs will separate the attractive from the ugly. Life for the fittest shapes, however, is only going to get better.









Hey, man, like, check out the artificial life: *Dancer DNA* is already wowing clubbers around the UK

It's a date

Japan: Sega Enterprises distributed this 1999 curious calendar to a lucky few in Japan, although **Edge** picked one up while chatting to Jean-François Cecillion (see p104) at Sega Europe's London HQ. Packed in a neat triangular box, the calendar is actually a roll of tape with the dates printed around it. By separating off the top layer of silver foil, you wend a frustrating path through the year. It's a novel idea, but one that's likely to end up wrapped around someone's head.





No, honestly, you use the little tweezers and... Never mind

DataStream

Total UK software sales over the two-week Christmas period: **£95m**
Number of PlayStations sold in the UK during the week ending December 21: **128,000**
Percentage of consoledomain voters who think that *Turok 2* is better than *Zelda*: **43%**
Amount of time it took *Zelda* to become the biggest-selling game of 1998 in the US: **39 days**
Percentage growth in American Internet shopping last year: **230%**
Percentage of UK Net users who have made purchases online: **25%**
Predicted number of emails per day in the US by the year 2005: **5bn**
Number of users logged onto AOL at any second: **900,000**
Number of MSN subscribers: **2m**
Number of Dreamcast owners who have subscribed to Sega's Internet service: **100,000**
Number of iMacs sold within six weeks of release: **278,000**
Number of Game Boy Color units expected to be sold by April: **8m**
Predicted number of N64s in use worldwide by the end of '99: **35m**
Number of PlayStations manufactured: **50m**
Amount two Belgians were fined for flanning Bill Gates: **$88 each**
Number of UK homes expected to have digital satellite TV by 2008: **5.6m**
Percentage of people in the UK with a mobile phone: **22%**
Additional cost of buying a Compaq Presario 5150 PC in the UK compared to the US: **£312**
Amount AT&T expects to spend dealing with Y2K modifications: **$500m**
Percentage of software in China that is pirated or illegally copied: **96%**
Amount of time it takes to produce a single episode of 'The Simpsons' from start to finish: **10 months**
Number of drawings needed for each episode: **24,000**

Sources:
Business Software Alliance
Financial Times
Office of National Statistics
www.consoledomain.com
IDC
ABC
Mori
People & Technology Business Report



Final frontier for FFVIII?


Square's series rolls unstoppably on

Japan: With *Final Fantasy VIII* set to bring videogaming one step nearer the holy grail of interactive entertainment, Square has decided to take the franchise to another level with the announcement of *Final Fantasy VIII: The Movie*. Details remain sketchy at present, but the full-length CG film is being made by SquareSoft's Hawaiian office, with cinematic expertise being provided by Sony-affiliate Columbia. The budget weighs in at a relatively substantial $70 million.

Set on earth in the year 2065, it is expected that *FFVIII*'s new cast of characters, such as Squall Leonheart and Laguna Loire, will lead the action. Some sources even suggest that instead of roping in the talents of Robin Williams and Angela Lansbury to voice the characters, as usually happens in these cases, computerised voiceovers are being considered. Perhaps of more concern, though, is the news that Square's own vice-president, Hironobu Sakaguchi, will take to the director's hot seat, while the necessary tinseltown input will be provided by 'Apollo 13' scriptwriter Al Reinert. It doesn't look like an obvious dream team but with 17 million games sold worldwide there should be some sort of fanbase for the finished reels. They'll have to be patient, though: the earliest the film is expected to open in Japan is mid-2001.

Wooden Apples





Japan: Founded by a pair of brothers, JAID is a company that beat Apple to the visual concept of iMac. Two years before the blue-tinted boxes started flying off the shelves and contributing to Apple's current well-being, JAID started customising the original grey boxes to fulfil its customers' wildest technicolour dreams. Even now, with Steve Jobs proudly boasting his five new flavours, few people would fail to be impressed by the quality of JAID's work. From wood to marble and all textures in between, customers simply have to provide a brief description of what wacky finish they want and send in their trusty computer. The service takes up to three weeks to complete and JAID is even branching out into the world of PCs.

• *For more details visit http://www.jd-net.com/MW*

Game school: part two

UK: Setting up a videogame studio can be a logistical nightmare. Luckily, **Edge** is here with a series of hints and tips for prospective software companies.

What publishers say and what they really mean

Anyone who wants to develop games for a living will sooner or later have to make contact with a publisher. These are the faceless, multinational (if you're lucky) corporations that eventually produce and distribute each finished game. Before the unwary developer goes anywhere near one, however, it is important to realise that publishing lingo can be a touch misleading. Here, then, are some common phrases and their true, shrouded meanings.

1. We're very excited that you chose to show us your product.
God help us, we're desperate. We haven't made a profit since 1992.
2. We've handed your demo to our Design Approval Group.
We've handed your demo to six clueless marketing graduates who once played Myst *for ten minutes and now believe this qualifies them as authorities on videogaming.*
3. Hmmm. Your game is very innovative and unusual.
We don't want it.
4. Your game is interesting, but there are a few things that need ironing out.
We want to turn it into Tomb Raider.
5. Good news! We loved the demo and we want to work with you!
Good news! We're going to make the next six months a living nightmare for your team as each week we come up with a new and flagrantly unrealistic list of demands for alterations.
6. The game looks fantastic.
It will be ready for Christmas, won't it?
7. The game is already receiving favourable press.
We've paid ten grand for it to go on the cover of PC Game Pro Plus.
8. The game hasn't sold quite as well as we'd hoped.
It sunk without trace. We're ruined.
9. The game has been moderately successful.
The game has been a huge hit, but feel free to watch in abject horror as the MD takes all the credit for your game – which he hadn't even heard of until briefed by his staff 24 hours ago – while you get a mention on page 43 of the instruction booklet.
10. We're looking forward to your next original and exciting game concept.
You've got six months to write the sequel.

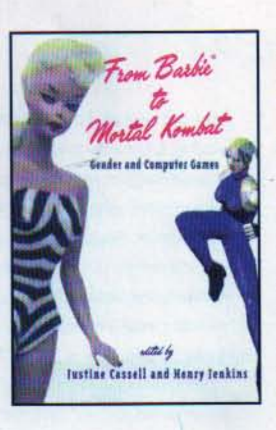




FROM BARBIE TO MORTAL KOMBAT

The barriers between technology and gender have long confused the games industry. And now, concerned with the lack of opportunities for women as well as the scarcity of appropriate software, American feminists are taking matters into their own hands.

Some writers view the problem as the perceived masculinity of technology per se. However, the success of software such as *Barbie Fashion Designer* and the Tamagotchi phenomenon cast doubt on this. Others suggest that the industry has yet to consider how to make games that would be interesting to girls. Studies show that they prefer open-ended games based around small-scale relationships, set in realistic environments. Extreme feminists argue that the male-dominated industry can't design good female-oriented games, whereas games companies such as Purple Moon find the biggest problem is getting retailers to stock games. The only thing everyone agrees on is that companies solving these problems successfully are going to sell a lot of games. Finally feminism talks a language the industry can understand.



Edited by: Justine Cassell and Henry Jenkins
Publisher: MIT Press
ISBN: 0 262 03258 9

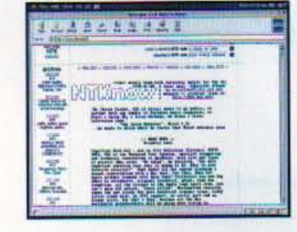
SLAUGHTERMATIC

The victory of style over content is guaranteed to produce either unreadable or explosive literature, but rarely both. Enter Steve Aylett. Riding the shirt-tails of Burroughs, with a touch of 'A Clockword Orange' and Irvine Welsh's inner-city doggerel, 'Slaughtermatic', like its author, Aylett walks tall and talks fast. 'If he were any more English he'd be dead,' reads Aylett's calling card. The same snappy arrogance fuels 'Slaughtermatic', a high-speed cyberthriller lacking brain but brimming with rapid-fire dialogue.

Set in Beerlight, a hyper-wild-west 'where to kill a man is less a murder than a mannerism,' the plot is simple. Hero Dante Cubit robs a bank to steal a book. Unfortunately, in the process he creates a doppelgänger of himself and, as predicted by standard sci-fi physics, the result of the two meeting would be as explosive as Aylett obviously believes his writing to be. Cue mayhem and the introduction of big guns. Like most cyber-authors these days, Aylett only writes well about hardware. His characters are merely ciphers, waiting to be gouged by some heavy ordnance or a sharp put down. Small wonder, then, that 'Slaughtermatic' reads more like a 2000AD strip reject than a cutting-edge novel. Still, graft in a *Quake* engine and it would make a great firstperson shoot 'em up.



Author: Steve Aylett
Publisher: Phoenix House
ISBN: 1 861591 22 5



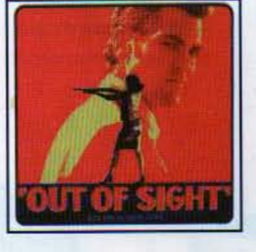
INTERNET
Site: NTK
URL: http://www.ntk.net/

Need To Know is a weekly Internet publication, updated every Friday afternoon, delivering a digest of all things in the realm of what would have once been quaintly deemed 'cyber', plus more besides. It's a purposefully bleak-looking affair, divided into sections such as 'Hard News' (developments of the week mauled at the hands of NTK), 'Anti News' (guff, essentially, but semi-interesting guff, at least) plus a clutch of complementary chunks, most of which offering links of varying juiciness. With a wide network of individuals pointing NTK in the right directions each week, the content here is unmissable to the tech-obsessed. Ignore the site's rather tiresome obsession with *Wired* and Bill Gates, and concentrate instead on the revelatory links. (Oh, and look out for the references to **Edge**.)



GOLDIE
Ring of Saturn
(FFRR)

After reaching untold heights with debut 'Timeless', Goldie crashed and burned with his overblown second album. Mini-album 'Ring Of Saturn' thankfully finds the drum'n'bass ambassador back on track. There's nothing here to match the mighty 'Inner City Life', but a seven-minute mix of 'Mother' comes close. Elsewhere punchy tracks and even some heavy melody work in places, most notably on 'What You Won't Do For Love'. A fine return to form.

DAVID HOLMES
Out of Sight OST
(Jersey/MCA)

Recent crime caper 'Out Of Sight' not only gave George Clooney the sort of big-screen success he deserves, but it's also noteworthy for providing David Holmes fans with a stopgap release before the next full studio effort. Short of the inclusion of some choice tracks from yesteryear and vocal samples from the flick itself, this could be that eagerly awaited third album. Which means the latin beats, slow jazz vibes and gritty rhythms are about marvellous as you could hope for. Few musicians do atmosphere better than Holmes.



VARIOUS
Megasoft Office 98
(F Communications)

An upgrade of the wonderful 'Office 97' edition, this is the second of F Communications' ambient compilations. The soundtrack to a day at the office is the unusual theme. Label regulars Frederic Galliano and Juri Hulkonnen provide the more upbeat moments, with Aqua Bassino and A Reminiscent Drive opening and closing proceedings respectively with the audio equivalent of a massage. Proof, just in case it's needed, that ambient needn't mean dull.



BOOM BOOM SATELLITES
Out Loud
(R&S)

The 12-inch compilation put out earlier this year in no way prepares the listener for this audacious debut. Opener 'Missing Note' packs in more sensory overload than a week of MTV. It's as if every neon sign and over-populated high-rise of the band's Japanese homeland is somehow pouring out of the speakers. The beats are big, the hooklines catchy, and the mashing up of rock, dance, jazz and hip hop effortless. An astonishing creation.

VIEWPOINT

EXPRESS YOURSELF IN **EDGE** – WRITE TO: LETTERS, **EDGE**, 30 MONMOUTH STREET, BATH, BA1 2BW (email: edge@futurenet.co.uk)

I am writing in reply to John Swan (**E**67) and the setup of video stores in respect to graphical content. You point out how graphically advanced games are being exposed to the public rather than the more playable games which are appreciated by gamers who can see through the mass of 'eye candy'. Being an employee of a major games retailer for some time, I might be able to shed some light on this issue.

The problem that John highlights is evident to a certain degree and will unfortunately stay with us. We receive specific orders from head office that certain windows must display a particular game, and that the product must be more prominent than others in store. With this scenario, we can see how companies can use their money to advertise and market a game that can be visually stunning but awful to play. The best example of recent times has to be *Formula 1 Grand Prix* on the N64, which is so mediocre, it's untrue. Its publicity, however, certainly contrasted to its playability. Several of our demo televisions had the game showing, while our major shop window was littered with posters telling us how great the game was. This is without mentioning the national TV adverts. So, where does the consumer stand?

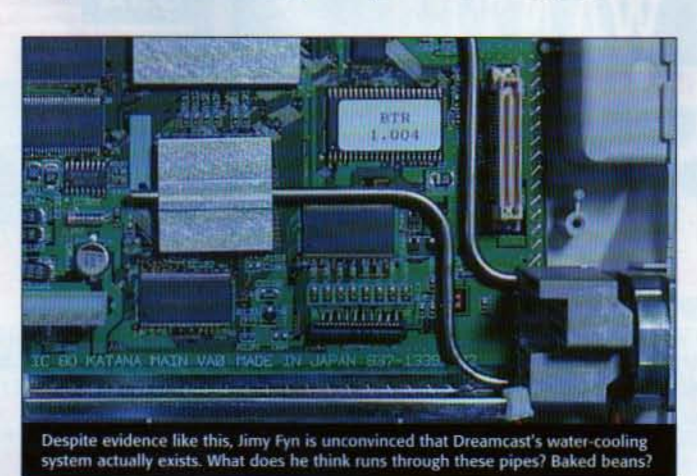
Well, like it or not, the main consumers are the younger generation. How can a ten-year-old not fall for polygon-driven graphics which make the jaw drop and the eyes sparkle? I can't help but think that these big companies are laying on the swish graphics ahead of gameplay to guarantee profit in an industry that's becoming extremely competitive. Unfortunately, consumers like John and I are certainly not being looked upon as the chief consumer any more, and this does upset me.

You at **Edge** mentioned the *FIFA* series as a perfect example of the marketing beast at work. The products in my opinion are shallow. Then we have *Sensible Soccer* of the '90s, which appeared on shelves, devoid of any real marketing. It took the gaming world by surprise. If the game is good, surely there's no better marketing than games magazines like yourself praising products? *FIFA '99* did not depend on you for good reviews. Rather, they depended on their ruthless advertising and marketing.

The future of videogames? I may not like to admit it, but it may be the case.

Matt Thomas,
via email

'I can't help but think that these big companies are laying on the swish graphics ahead of gameplay to **guarantee profit.** Consumers like us are certainly not being looked upon as the **chief consumer** any more, and this does upset me'



Despite evidence like this, Jimy Fyn is unconvinced that Dreamcast's water-cooling system actually exists. What does he think runs through these pipes? Baked beans?

As in the previous 16bit battle, Nintendo rather belatedly brought its heavy guns to bear with a relative barrage of quality titles over the festive period, including *Zelda* and *Turok 2*. Having had the good fortune to receive both titles, it throws in stark contrast the difference between the creation of a truly brilliant title and a merely good one.

I had doubted that Nintendo could possibly deliver the promise of a *Mario*-beater within the confines of cartridge technology, yet the result of three years' development is evident in the packing of a truly absorbing 3D world inside a small rectangular piece of plastic. Acclaim too has realised the same goal (albeit with a more gory slant), yet what truly divides the companies is that elusive playability factor that Nintendo always seems to apply to the major titles. With *Turok 2*, who can claim to enjoy *having* to spend four to five hours at a time retrudging over an overly large level without the remotest possibility of a Save point and with the real certain possibility of having to do it all again? Although the visceral experience *Turok 2* delivers is well achieved, the problems that its team fixed from the first outing have now been replaced by bigger ones. Have marketing forces again pushed a game on to the shelves too quickly, or is it only the might of Miyamoto to 'Just Say No'?

Back to level four again...

Mark Hughes,
via email

Let's face it: *any* game is going to look flawed by comparison.

The news article in **E**67 was quite right – and emulation is going to be forced into the same 'back alley' as so-called warez and appz sites. But does the ISDA do anything about the multitude of these true piracy sites, where my friends and I can, if we so please, download the latest PC games? Just recently people I know have downloaded *Caesar III*, *Quake II*, *Carmageddon 2*, *Unreal*, *Gangsters*, *Thief*, *FIFA '99* and even *Half-Life*.

The ISDA only seems to take offence if a game I download is three or four years old. Because of this I don't know whether I will ever pay for a PC game again (except *Half-Life*). The asking price, considering the low quality of most new titles, is certainly much higher than the cost of a local phone call.

The fact that most SNES, NES, Mega Drive, Neo Geo (etc) games are either no longer for sale or not available in this country is the sting in the tail. Without emulators I

would never have discovered that *Final Fantasy VII* is inferior to *VI*, or that such an unlikely idea as *Chrono Trigger* would work so well. Also, with prices of as much as £300 for a Neo Geo CD I doubt I will, as an unemployed student, be able to afford arcade-quality games before the '200 Mega Shock' becomes just another games legend.

Tobe Hammans, via email

A proportion of **Edge**'s readership is still purchasing SNES, Mega Drive and Neo Geo cartridges, in fact. You don't need emulation to grab a slice of such recent history.

The articles 'The Land That Time Forgot' and 'Physics Matters' in **E**67 raised some interesting points. Throughout them it became clear to me that an arguably more important topic was being raised. I feel that the topic of realism versus gameplay mechanics is the real issue. There has always been a conflict here to some degree and it seems to me that the buying public would always rather tolerate a backward shift in play mechanics than in realism. Because of this technology-led environment we get a cycle of most-realistic-ever-but-shallow game followed by a similarly realistic game, but with the gameplay put back in.

Of course, there are exceptions to this rule: *Doom*, *Gran Turismo* and *Metal Gear Solid* all lead in both fields simultaneously. The games market is still very immature and will remain so until this cycle is broken by the levelling out of technological advances. You mentioned that 'complex poly-pushing code has seen the bedroom coder consigned to distant history'. Although this is definitely a bad thing I believe we are approaching an era of the bedroom designer instead. Level editors for firstperson shooters are the first step towards more refined 3D gameplay and a more mature industry. How different the gaming world would have looked had Sony's Net Yaroze come with a fully editable game engine rather than the measly C compiler. Currently Sega is in the best position to do this via its internal Dreamcast modem and Dricas Website. If it could release a high-level visual editor and some 64DD-style modelling tools then that might change everything.

Alex Simon, via email

The bedroom remains one of the most fertile environments around. As you so correctly note, though, empowerment is the key.

After reading your article 'The Land That Time Forgot' I started thinking about my personal preferences in the 2D/3D argument. I also spoke to a young friend who had recently bought *Commandos* for his PC. He was not around to see the golden age of 2D games and has been weaned on polygon games. When I asked him about the graphics in *Commandos* he said that compared to polygons they were exceptionally crisp and detailed and looked very realistic. This reminded me of an argument I had years ago at school. I remember reading a review of *Star Fox* and saying to a friend how I really wanted it and thought it looked superb. He looked at the screenshots and said it looked crap and that 3D games sucked because the graphics looked like a bunch of cardboard boxes being thrown around. Although 3D has come a *long* way, it still cannot replicate the intricate detail that you can squeeze into a hand-drawn 2D game. A good example of this is *Street Fighter*: The 3D versions may move more fluidly, but the 2D games look *far* superior.

It seems to be getting to the point now where almost any 2D game can look better with polys than it can with sprites (your *Total Annihilation/Dark Reign* comparison was a very good example of that) but I still hunt for the ultimate 2D shoot 'em up, as it's still my favourite genre of game, and 3D has made no improvement to it (*Einhänder* is nowhere near as good as *Mr Heli*).

Imagine, with today's technology, a twoplayer sideways-scrolling shoot 'em up incorporating all the best elements of *Rolling Thunder 2*, *Contra IV* and *Bionic Commandos*. Now that would be something.

One more thing: *Smash TV* is the greatest twoplayer game ever. Let's see it re-released. I'd buy that for a dollar!

Craig, via email

Mr Heli better than *Einhänder*? You'll be saying *Shinobi*'s better than *Ninja* next...

'The ISDA only seems to **take offence** if a game I download is three or four years old. I don't know whether I'll **ever pay for a PC game again**. The asking price is much higher than the cost of a local phone call'

Is **Edge** doing its April edition early with the Dreamcast supplement? What are you on, Ecstasy? Water cooling, in a console? I thought I was reading *Car* magazine.

What a way to take the urine, you really fooled me. I admit I fell for it hook line and SINKer.

Jimy Fyn, via email

It's all true. You should see **Edge**'s games room. Flooded now, it is.

In response to Tony Pyle's letter about 'Playstation 1.2' in **E**67, I think he might actually be on to something...

I own one of the first PSXes to come into Britain, and my brother noticed that *Soul Blade* was slightly different on his mate's PlayStation, which is one of the newer models. He claimed the textures were clearer, and the 'flames' caused by the swords were more vibrant and gave much more visual impact.

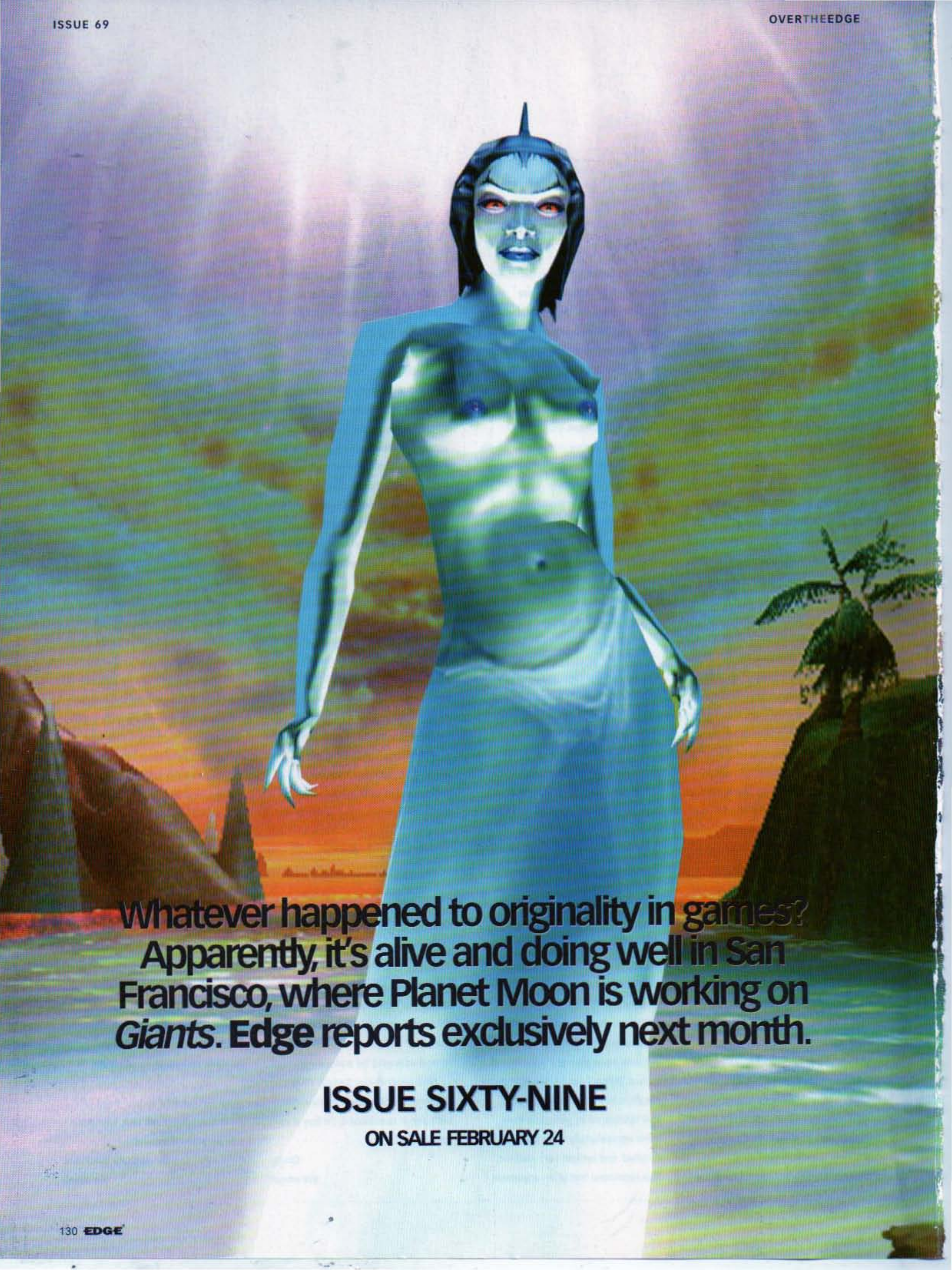
I told him he was being daft, but he was adamant that it was different on his mate's machine. Just thought I'd let you know.

Tony Bolton, via email

This is just one letter **Edge** received concerning Sony's clandestine modifications. Anyway, consider yourself fortunate, Tony, that you have one of the originals that remains in ship-shape fashion...

Just wanted to say: Sega will lose, Sony will win, Nintendo will be around forever.

Dr Andrew Warriner, via email


Whatever happened to originality in games? Apparently, it's alive and doing well in San Francisco, where Planet Moon is working on *Giants*. **Edge** reports exclusively next month.
ISSUE SIXTY-NINE
ON SALE FEBRUARY 24




Future
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